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ROSENMÜLLER ON THE MINERALOGY AND BOTANY
OF THE BIBLE.

EDINBURGH:
THOMAS CLARK, 38. GEORGE STREET;

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THE
MINERALOGY AND BOTANY

OF

THE BIBLE.

✓ BY

E. F. C. ROSENMÜLLER, D. D.

TRANSLATED FROM THE GERMAN,

WITH ADDITIONAL NOTES

BY

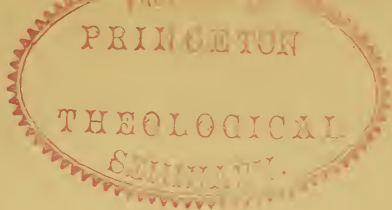
T. G. REPP AND THE REV. N. MORREN.

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PREFATORY NOTE

BY ONE OF THE TRANSLATORS.

THE translation of the present volume having been begun by Mr. Repp, was carried by him through the press, down to the two hundred and twenty-fourth page, but was there left unfinished, in consequence of his departure from Scotland. At the Publisher's request, I undertook to complete the volume, and am therefore accountable for all that follows from p. 225 to the end.

The original forms part of Rosenmüller's "Biblische Naturgeschichte," being the first half of the fourth volume of his "Handbuch der Biblischen Alterthumskunde," a work, of which a portion has already appeared in the Biblical Cabinet, under the title of the "Biblical Geography of Central Asia." Like all the Author's writings, it will be found to contain manifest traces of erudite research and discriminating judgment. It may be well, however, to forewarn the younger student, of the great obscurity in which many of the points here discussed are involved, and of the

consequent uncertainty of the results. Perhaps no branch of sacred philology presents greater difficulties than the Natural History of Scripture. The Hebrew terms for not a few of the productions of nature belong to the class of the ἀπαξ λεγόμενα, occurring only once; and when the cognate languages, the ancient versions, the Jewish commentaries, and other exegetical helps, either fail us altogether, or perplex by their contradictions, we are left very much to remote conjecture, founded on the supposed meaning of the root, or, on what is deemed suitable to the context. In many cases also, though the *generic* description of a mineral or plant may have been ascertained with tolerable accuracy, the particular *species* may remain unknown, either from the want of sufficient *data*, or because no minuter specification than that of a tribe or family, was intended by the original writer. Thus as to the "Burning Bush" of Moses, it may be admitted that *Senec*, in all probability, denotes some thorny shrub; but that it is the *Rubus Sanctus* is a gratuitous assumption, unsupported by any proof, for indeed the case admits of none. Now if this holds true even of those products that were indigenous to Palestine and the adjacent region, still more difficult must be the precise identification of those objects of natural history, which were brought to Judea as articles of trade, or were known there only by name.

If it be still matter of doubt as to what particular species of trees yield the *cassia* and *cinnamon* of commerce, (and even what is the true rhubarb plant of the dispensatory,) it is in vain to expect that the *ketzioth* and *kinnamon* of the Hebrews, should be identified with any greater certainty.

There may seem to be some omissions in the work, but they are only apparent, being occasioned by the different interpretations here given to various Hebrew and Greek words, from what they bear in our authorized version. The indices at the end have been so framed as so supply these seeming defects. In a few cases, the omission arises from the circumstance, that the original word was not supposed by the author to denote any mineral or vegetable production whatever, *e.g.* ערער in Jer. xvii. 6: xlvi. 6, rendered in the English translation by "heath." The *Bdolach* or *Bdellium* of Gen. ii. 12, which is by some held to be a precious stone, was by Rosenmüller considered to be *the pearl*, and therefore finds a place in his *Biblical Zoology*, along with the *Ramoth* or *Coral*. As for the terms Ἀμάραντος, Ἀμαράντινος, Ἀμίαντος, &c. &c. λ, which have been introduced into some works on the *Natural History of Scripture*, they are mere allusive epithets, employed figuratively; and nowhere in the Bible are the productions mentioned, to which these adjectives are supposed to have a reference.

Some additional matter has been inserted, both in the body of the work and in the notes. The word *caprifigation* is sometimes incorrectly used, to describe the manner in which the *palm tree* is fructified, and hence the author seems to have taken for granted, that the caprifigation of the *fig-tree* is effected by a similar process ; but that error, and others of less moment, I have taken occasion to correct.

N. MORREN.

GREENOCK, *July*, 1840.

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SECTION FIRST:

EARTH, EARTHS AND OTHER MINERAL SUBSTANCES.

1. EARTH.—The element Earth is, in the Hebrew language, expressed by these three vocables, *Adamah*,¹ *Erez*,² and *Aphar*.³ The two first of these words also denote the orbis terrarum, *the earth's whole body*. *Adamah* also signifies the cultivated or cultivable soil, or *arable land*, Gen. iv. 2. Isa. i. 7; xxx. 23. *Aphar* is dry earth converted into *dust*,⁴ as for example, Numb. xxiii. 10, where it is applied as a figurative expression to a numerous people. Earth

¹ אֲדָמָה. This word seems more properly to signify *red earth*, for the root אֲדָם denotes, *to be red*.

² אֶרֶץ. ³ עָפָר.

⁴ The word has the same meaning in the Arabic. *Reiske* in his additions to the Hist. of the Royal French Acad. of Pol. Lit. Vol. xi. p. 171, has given an explanation of this word, from *Dsheuhari's Arabic Dictionary*.

and dust is the element from which man was formed by the Creator, (Gen. ii. 7), and unto which he dying returns, Gen. iii. 19. Job x. 9. A *clod of earth*, is in Job. vii. 5, called *Gush*:⁵ it is the emblem of the dusty earthen hue and crusted appearance of the skin of a leprous man. There are two other vocables denoting clods of earth: *Regabim*,⁶ and *Megrephot*.⁷ Fine *Dust* set in motion by the walk of men or animals, is called *Abak*,⁸ and a *dust-particle*, or atom *Shachak*.⁹

2. *Clay*, that tough and unctuous earth, from which earthenware is made—potter's clay, is in Hebrew called *Chomer*, and in Chaldee, *Tin*,¹⁰ Isa. xxix. 16. xlv. 9. Jerem. xviii. 4, 6. This appellation is also used of *Mud*, *i. e.* potter's clay mixed with sand, of which houses are built, in countries where stones are not to be found. Job iv. 19, it is said of mankind, that they dwell in huts of clay.^{11(a)} Besides *Chomer*, Nahum iii. 14, also makes use of the expression, *Tit*,¹² (of which the ordinary acceptation, however,

⁵ גֹּשׁ. ⁶ רֶגְבִים Job xxi. 33; xxxviii. 38.

⁷ מְגֵרְפוֹת. Joel i. 17.

⁸ אֲבָק Deut. xxviii. 24. Nah. i. 3. Song of Sol. iii. 6.

⁹ שַׁחֲקַק, Isa. xl. 15. ¹⁰ טִין, חֲמֶר.

¹¹ בְּתֵי חֲמֶר.

(a) We meet with an interesting parallel among the Brahmins of India.—When a person dies, they never make use of the expression, “he is dead.” Their phrase is, “Such an one has left his *clayey tenement* this morning.”

¹² טִיט.

is *Dirt*, (β) for clay or mud employed for building, and Isa. xli. 25, uses the word *Tit* in the sense of potter's clay. The fields of Jericho, as far as the Dead Sea, consist of a grey sandy loam, which *Hasselquist*¹³ found to be so loose that the horses sunk in it up to their knees.

3. *Sand*.—Alluvial sand, quick sand, in Hebrew, *Chol*,¹⁴ frequently occurs as a typical expression for an innumerable multitude, as for example, in Gen. xxii. 17; xxxi. 12; xli. 49. According to *Sieber's* account,¹⁵ the winds blowing from the seaward, have heaped up large hills of sand at *Jaffa*. Every year the quick-sand advances further east; it has covered and laid waste the most fertile parts of the country, and the sandfield is now so extensive, that no less than half an hour's walk across it, takes you to the beach.

4. *Salt*.—There is abundance of *salt* in Palestine, which in the Hebrew language is called *Melach*.¹⁶ The water of the Dead Sea is extremely salt like a very strong brine, and remarkably good kitchen salt is made of it, on the eastern shore of this lake; the salt is found in lumps, frequently exceeding a foot in thickness, in places where the lake had overflowed its banks during the rainy season. The stones on the shore are, as in salt-pits, covered with an incrus-

(β) The English word seems to have even an etymological affinity with the Hebrew, cfr. Isl. and Scot. *Drit*.

¹³ Journey to Palestine, p. 152.—Germ. Transl.

¹⁴ חול. ¹⁵ Journey from Kahira to Jerusalem, p. 19.

¹⁶ מלח.

tation of lime and gypsum. Bows and branches of trees and bushes, which fall into the lake, are covered with a kind of petrefaction consisting of salt, and if wood is thrown into it, it soon gets a crust of saline particles.¹⁷ From this phenomenon it has been attempted to explain that Lot's wife, according to the record of Gen. xix. 26, was converted into a pillar of salt.* At the southwest corner of this lake, there is a plain, which is several miles in length, entirely covered with salt, and without the slightest trace of vegetation. This, no doubt, is the salt-valley where David's army slew the Edomites, Ps. lx. 2, sqq. cfr. 2 Sam. viii. 13. 1 Chron. xviii. 12. The *Salt-pits*¹⁸ mentioned in Zephaniah ii. 9, probably do not denote mines of rock-salt, but rather pits like those which the Arabs still use to dig on the shore of this lake, and which are filled by its inundation in spring, when the melted snow so increases the lake that it overflows its banks. When the water in these pits afterwards evaporates, it leaves behind a salt crust, which is about an inch thick; this is the salt commonly in use in the whole country.¹⁹ Ezek. xlvii. 11, seems

¹⁷ *Seetzen* in the Monthly Correspondence, Vol. xviii. p. 432.

* Cfr. "Das Alte und Neue Morgenland," i. e. The Orient. in Ancient and Modern Times, Vol. i. p. 84.

¹⁸ מְבִרָה-מֶלַח.

¹⁹ Pococke's Description of the Oriental Countries, Vol. ii. p. 54, Germ. Transl. In a similar manner salt is obtained, according to Maundrell's account, (See Paulus' Coll. of Travels, vol. i. p. 188) in the salt valley, eight miles from Hhaleb. Some brooks run through the valley, which during the rainy season inundate

to have a reference to such salt water-pits. A salt city²⁰ not far from the Dead Sea, is mentioned, Josh. xv. 62. The use and utility of salt is well known, Sirach. xxxix. 31, reckons it, as well as water, fire, iron, milk, honey, wine, oil, and clothes, among things indispensable for the life of man. Therefore, Job vi. 6, puts the question: Can that which is unsavoury be eaten without salt? Because salt is indispensable for the enjoyment of food, the payment or aliment received by one in the service of a superior, was called *Salt*. Thus we read Ezra iv. 14, in the Persian Chancellor's letter to the king: We who *salt* with the *salt* of the palace, *i. e.* we who are in the king's pay. And even in our days, in Persia and the East Indies, the phrase, to *eat one's salt*, signifies, to receive support from him—be in his pay.²¹ In conformity with the commandment, Levit. ii. 13, salt was used in all sacrifices, they being considered as meals set before the deity. New born babies were rubbed with salt, as may be seen from Ezek. xvi. 4. St. Jerome says,²² that this was done with the view of drying up the superfluous humidity from the body,

the whole plain; in summer the water is dried up, and there remains *on the surface of the ground, a salt crust*, which is gathered into heaps and sorted according to its different quality.

²⁰ עֵיר הַמֶּלַח.

²¹ See "Das Alte und Neue Morgenland." The Oriental Countries in ancient and modern times, Vol. iii. p. 276. Hence the Latin *Salarium* for a soldier's pay. Pliny's Nat. Hist. Lib. xxxi. cap. 7. *Honoribus etiam militiisque sal interponitur; salariis inde dictis.*

²² In the commentary on the passage.

and on purpose to contract the pores which were supposed to be too open. Galen too observes,²³ that salt makes children's skin more hard and fast. Salt is a remedy against corruption and dissolution, and accordingly, when solemn contracts were ratified, a dish of salt, as a symbol of their permanency, was in readiness, that each of the contracting parties might eat a few grains.²⁴ For this reason, an irrevocably everlastingly permanent covenant, is Numb. xviii. 19. 2 Chron. xiii. 5, called a *Covenant of Salt*. No plant can grow in a soil covered with salt, therefore, a *salt land*,²⁵ (δ) means sterile waste land, Job xxxix. 6; Ps. cvii. 34; Jerem. xvii. 6; Zephan. ii. 9, and salt was considered as the emblem of barrenness. When Abimelech had conquered, and entirely destroyed the city of Sichem, he strewed salt over the place where it had stood, Judg. xix. 45, as a sign that it should remain barren. After a similar manner, the Emperor Fredrick Barbarossa, when he had destroyed Milan in the year 1162, strewed salt on the place, and made the plough pass over it. On the other hand, because salt seasons meat and makes it savoury, it is used as an emblem of just discernment and apposite discourse. *Let your discourse always be seasoned with SALT*, says

²³ De sanit. L. I. Cap. 7.

²⁴ See Erasmus on the Adage: "Salem et mensam ne prætereas," Adag. p. 193, the Edit. of 1558. Cfr. Schulz's "Leitungen des Höchsten," i. e. Guidances of the Most High, Vol. v. p. 247.

²⁵ מֶלַח בְּרִית

(γ) מֶלַחָה Tr.

St Paul, Coloss. iv. 6, and Jesus, Mark ix. 49.(δ) *Have always salt with you.*²⁶ His disciples he calls, Matth. v. 13, the *salt of the earth*, *i. e.* of mankind, because mankind by their teaching is to be instructed and improved.

5. *Nitre* or *Natrum* [Soda,] in Hebrew *Neter*²⁷ is an alkaline mineral salt, which occurs sometimes as the grounds of salt waters, sometimes as an efflorescence of rocks, lavas, and even of black earth. The Egyptian *natrum* is found in a native state in two lakes described by Pliny,²⁸ which are situate between the two cities; Naukratis and Memphis. The region where the larger of these soda-lakes is found, is in modern times called the desert of Seete. It lies a good day's journey from the western bank of the Nile, not far from the monastery of St. Makarius. The lesser soda lake is also situate westward from the Nile, in the province of Bahheira, a day's journey from Alexandria. In both these lakes the water is

(δ) The passage quoted we find not in v. 49, but in v. 50. Here is a slight deviation from the words of the text: ἔχετε ἑαυτοῖς ἅλας accurately translated in the English Bible, “*Have salt in yourselves.*”

²⁶ The Romans too had this meaning of the word *Sal*, Terentius Eun. Act. iii. Sc. 1. Vs. 1. Qui habet *salem* qui in te est. *Catull.* Carm. lxxxvi. Vs. 4. Nulla in tam magno est corpore mica salis.

²⁷ נֶטֶר

²⁸ Hist. Nat. Lib. xxxi. cap. 10, § 46. Illustrative remarks on Pliny's description are contained in J. D. Michaelis, Commentat. de Nitro Plinii. Commentatt. in Societ. Reg. Scientiar. Goetting. per annos 1758—1762, praelectt. p. 136, sqq.

one or two feet deep above the natrum, which lies in the bottom in a layer, four or five feet thick. It is cut out with iron shovels, having a sharp edge below, it issues quite pure and perfect from its mine, requiring no further preparation. The mineral salt which has been taken away, is, after some time, restored by a new supply spontaneously produced in the earth.²⁹ Natrum is not only used as a medicine, and for glass-making and bleaching, but also as a soap.³⁰ Therefore Jeremiah says: ii. 22. "*Even wert thou to wash thyself in nitre, and rub thyself in lie, the defilement of thine iniquity is clearly seen by me.* Prov. xxv. 20, it is said that:" *taking away a garment in cold weather, and singing a song to a person in distress is like vinegar on nitre, i. e. unsuitable, ill-timed, and*

²⁹ Sicard in his *Nouv. Mémoires des Missions de la Compagnie de Jesus dans le Levant*, T. i. p. 62. sqq. and in Paulus's *Coll. of Travels in the East*, Vol. v. p. 182, sqq. Androssy's *Mémoire sur la vallée des lacs de Natron* in his *Mémoires sur l'Egypte*, T. ii. p. 276, sqq. Berthollet's *Observations sur le natron*, *ibid.* p. 310, sqq. Cfr. *Description de l'Egypte* T. xxi. p. 205, sqq.

³⁰ Hasselquist's *Journey to Palestine*, p. 548, in the Germ. transl. *Natron* in Aegypto hodie vocatur sal e fodina prope Mansuram extractum, lapidi calcareo mixtum, aceto effervescentis, coloris albido-rufescentis. *Usus ejus est apud Aegyptios* (1) quod pani immittant fermenti loco; (2) ad lintea lavanda, saponis loco. *Forskäl Flora Aegypt. Arab.* p. xlvi. *Usus lotorius nitri* اطرون (*atrun*) et نظرون (*natrun*) appellant, adhuc Aegyptiis vulgaris est. Cfr. Beckmann's *History of Inventions*, vol. iv. p. 15, sqq. and the same author's notes on Aristotle's book, de mirabilibus auscultatt. Cap. 54.

hurtful, for natrum is dissolved by vinegar, and loses its purifying power.³¹

6. *Brimstone*, in Hebrew *gophrith*³², is a mineral which has *no metallic basis* (ϵ) and accordingly is combustible, easily fusible and inflammable; burns with a bluish or a white flame, and a peculiar suffocating smell; but evaporates if the air is excluded while it is subjected to an increased temperature; it is soluble in oil and in alkaline solutions. The *natural or native* brimstone is found in pulverized or crystallized masses, and also in a stalaktide or nephroide form, chiefly in layers of gypsum, in the galleries of several minerals,—and near volcanoes and mineral wells, more particularly near hot wells. The common sulphur is made by art from the markasit:³³ It occurs in many crystals—in rock formations of almost every kind, and it is spread nearly over the whole earth.³⁴

³¹ Others suppose that this simile alludes to the disagreeable smell arising from natrum when vinegar is poured upon it.

³² גֹּפְרִית.

(ϵ) In the present state of chemistry, it is at least unnecessary to say thus much; besides we know that Dr. Hans Christian Oersted would undertake to prove the contrary, and establish that sulphur is a metallic mineral. Here all depends on a *strict* philosophical definition of the word *metal*, and we scarcely need mention here, that the ancient characteristics of metal are now quite unavailing, since in reality even hydrogen and oxygen, are quite as much *metals* as quicksilver or gold. Moreover, the combustibility of sulphur is certainly not owing to the absence of a metallic basis, since all metals, gold and platina inclusive, *are combustible* when heat of a suitable intensity is applied to them.

³³ Pyrites. ³⁴ Perleb's Compend' of Nat. Hist. p. 58. 111.


The prophet Isa xxx. 33, in describing the destruction of the foes of the Hebrews, makes use of the figure of a pile of wood which Jehovah's breath would kindle like a stream of brimstone. Describing the destruction of Edom, xxxiv. 9, he says: *Its brooks shall be turned into pitch, and its dust (ז) into brimstone.* Revel. xiv. 10; xix. 20; xx. 10; xxi. 8; hell is described as a *pool (λίμνη) of brimstone.* The cities of Sodom and Gomorrah were, according to Gen. xix. 24, 25, destroyed by *rain of fire and brimstone.* It is not contrary to the laws of nature, in a country which has abundance of brimstone and naphtha, that a great quantity of inflammable particles may be attracted by thunder clouds, and drawn into the upper regions of the atmosphere, that they may be kindled by an electric spark, and fall to the earth again in the form of a rain of fire; and examples are not wanting, of brimstone and other burning bituminous substances having fallen on the earth.³⁵ Rain of brimstone is frequently mentioned as a kind of punishment by which the ungodly are destroyed. Thus in Job

(ז) *Its dust, i. e. ground, soil.* עֶפֶר *Aphar* properly denotes dust; in the tropical countries, where the soil is often parched, it also denotes the ground in general. It is proper to observe, that as to the word *Aphar* we have here a parallel to Job xix. 25, and that it is incorrectly translated in the English Bible by *earth*. It means there as well as here *dust*; there, however, in a special sense of *lists*, a field of strife and contention, *arena*, as has been rightly observed by Eichhorn in his version of Job.

³⁵ See "Das Alte und Neue Morgenland," Vol. i. p. 74, sqq.

xviii. 15, we read, “that brinistone shall be scattered on the habitation of the ungodly!” And Ps. xi. 6, that “the portion of the ungodly shall be *fire, brimstone and tempests.*” Ez. xxxviii. 22, announces that plague, blood, hail, fire and brimstone, shall fall on Gog’s army.

7. *Bitumen* or *Asphaltos*, in Hebrew *Chemar*,³⁶ is an earth-resin, containing more or less of earthy admixture, of a dusky black colour, and strong greasy lustre, fusible in a moderately increased temperature. It is to be found partly in mountains, and partly floating on the surface of wells and lakes, particularly on the Dead Sea in Palestine, (and for this reason the Germans call it *JUDEN PECH—Jews pitch*,) where it floats on the surface like melted pitch, and is gradually condensed through the heat of the sun, and the salt which mingles with it.³⁷ There were *Asphaltos pits* in the valley of Siddim, before the Dead Sea was formed there, Gen. xiv. 10. Mariti* found, westward from the Dead Sea, such pits, or rather chasms. According to Gen. xi. 3, *asphaltos* was used instead of lime or cement, for the building of the tower of Babel; and the inhabitants of the country of Babylon have in all ages made use of the asphaltos for similar purposes. Describing a lake in the desert near Bagdad, (which was full of asphaltos, frequently overflowing the banks of the lake,)

³⁶ חֶמָר, Arabic  Chommar.

³⁷ Rosenm. Bibl. Geogr. Vol. ii. Pt. 1. p. 188.

* Journey through Cyprus, Palestine, and Syria, p. 427.

Balbi³⁸ states, that if the inhabitants in the neighbourhood did not make use of this bitumen for their buildings, *employing it as a cement for the making of their bricks*, mountains would be formed of this substance. In the island of Zante too, bitumen hardened in the sun is an almost insoluble and indestructible cement. This appears on the stone-wall with which the inhabitants have surrounded their reservoir; the pressure of the water-mass has caused the bitumen to enter between the stones, and so firmly to cement them together, that they can be sooner broken than separated.³⁹ The Egyptians, according to Pliny,⁴⁰ made use of asphaltos for pitching and making water-tight the small boats of plated papyrus reed which are commonly used on the Nile. The little reed boat in which the mother of Moses exposed her child on the Nile, Exod. ii. 3, was made tight with pitch and asphaltos.

8. *Naphtha* is a thin-liquid, yellow, earth-oil, frequently clear and transparent like water: it is used for lamps. It issues from the bosom of the earth in many places in the isle of Naphtonia, in the Caspian Sea, and near Baku on the west coast of the same sea;⁴¹ likewise at Karkhuk in lower Kurdis-

³⁸ In Purchas's Collect. of Voyages, Vol. ii. p. 1722.

³⁹ Christ. Muller's Journey through Greece and the Ionian Isles, (Leipz. 1822,) p. 116.

⁴⁰ Nat. Hist. Lib. XIII. cap. 11.

⁴¹ Copious descriptions of the Naphtha pits in this region are to be found in Kämpfer's Amœnitt. exott. p. 273, sqq.; Hanway's Journey through Persia, Vol. i. p. 278, sqq.; S. G. Gmelin's Journey through Russia, Vol. iii. p. 43, sqq.; and Ker Porter's Travels, Vols. i. ii. p. 515, 517.

tan.⁴² The soil through which the naphtha issues, is a kind of clay or mixed marl ; for mineral acids bring it into effervescence, it hardens in the fire, and it can be moulded when softened in water. This earth is thoroughly impregnated with the naphtha. If it is stirred up to the depth of two inches, and touched with a burning coal, it immediately kindles. The flame is bluish-yellow, and although it does not consume the earth, it so heats it that it cannot be touched with the hands near the burning place. Such earth impregnated with naphtha, is no doubt meant in Theodotion's Greek version of Daniel, (Asarya's prayer, v. 46,) where it is related that the burning oven in which the three men who refused to adore Nebuchadnezzar's statue were to be burnt, was heated with *naphtha*, pitch, and dry twigs.

⁴² Ker Porter, l. c. p. 440.

SECTION SECOND.

STONES AND ROCKS.

1. EBEN¹ is, in the Hebrew tongue, the common appellative for a stone in general. Fossils found in mines are, in Job xxviii. 3, called the *stone of darkness and of the shadow of death*. Pebbles and gravel are denoted by the vocables: *Chazaz*,² *Meoth*,³ and *Zeror*.⁴

2. *Zur*⁵ is the common and general name for *Rock*. Less frequently rock is denoted by the word *Challamish*.⁶ This word at the same time seems to signify a particular kind of rock. For, Deut. viii. 15, we read, that when the Israelites were journeying through the Arabic desert, God made water to flow for them out of the *Challamish-rock*.⁷ The hills of the peninsula of Mount Sinai, for the most part consist of granite, porphyry, and greenstone

¹ אֶבֶן.

² חֲזָז.

³ מְעוֹת.

⁴ זֶרֶר.

⁵ זֹר.

⁶ חֲלָמִישׁ, ex. gr. Isa. l. 7. Ps. cxiv. 8. Job xxviii. 9.

⁷ מֵעֵזֶר הַחֲלָמִישׁ. Deut. xxxii. 13, we find the

phrase inverted, מִחֲלָמִישׁ זֶרֶר.

rocks;⁸ but, J. D. Michaelis' supposition,⁹ that the Hebrew word precisely denotes that reddish granite of which Mount Sinai and neighbouring mountains consist,¹⁰ can not be positively affirmed. *Sela*¹¹ is another Hebrew word, denoting a rock. It applies to high precipitous rocks, on which the chamois goats dwell, and the eagles build their nests, Job xxxix. 1, 28, and which serve to man as places of refuge, Judg. xv. 8, 11. I Sam. xiv. 4. Ps. xviii. 3. The corresponding Chaldaic and Syriac word is *Kepha*.¹²

3. The Hebrew word *Gir*¹³ denotes *lime-rock*. In Isa. xxvii. 9, broken *Gir-stones*, i. e. *lime-stones*, (to be burnt into lime or mortar,) are mentioned. The mountains of Syria and Palestine consist of hard whitish lime-stone, which sounds like quartz, and which is to be found in beds that lie sometimes in a higher, sometimes in a lower situation.¹⁴ In the neighbourhood of Jerusalem, the hills consist of a lime-stone almost resembling flint, of a white or pale yellow colour. Further off, and near to the Dead Sea, they consist of a loose lime-stone, which

⁸ Rosenm. Bibl. Geogr. Vol. iii. p. 102.

⁹ Poccoke's Descr. of the Or. Vol. i. p. 213, 215, sqq.—*Germ. Transl.*

¹⁰ Supplem. ad Lexx. Hebr. p. 782, sqq. Cfr. Pareau's Comment. on Job, chap. xxviii. in his Commentat. de immortalitatis notiis cet. p. 287.

¹¹ סֶלַע.

¹² כִּיפָּא.

50-

¹³ גִּיר, Arabic جير.

¹⁴ Volney's Journey through Syria and Egypt, Vol. i. p. 232.

is partly white, and partly of a greyish colour, and between these is found a reddish glimmer-stone¹⁵ in alternate layers. The sepulchres of the Kings of Jerusalem are excavated in a lime-rock, and the doors of these were made of a hard lime-stone.¹⁶

4. *Sid*¹⁷ is the Hebrew vocable for gypsum. This is apparent from Deut. xxvii. 2, 3, where Moses commands that the stones to be erected on the other side of Jordan, and on which the law is to be engraven, shall be plastered over with *Sid*. Lime cannot be meant in this place; for, as lime is soft and brittle, so stone plastered over with it would have been less suitable for receiving a durable inscription than the bare stone itself. A completely hardened incrustation of gypsum is much better suited for such a purpose.¹⁸ It has been supposed that the stones were to be plastered over after the letters had been engraven, in order to secure them against corrosion, and the decomposing effects of the atmosphere, and also with the view, that when in course of time, the incrustation should have mouldered away, the inscription might appear in perfect preservation; but the circumstance, that in the passage here alluded to, Deut. xxvii. 2, 3, the plastering over of the stones with gypsum *is first* mentioned, and *then* the engraving of the inscription, is adverse to this opinion. It appears, however, from Dan. v. 5, and Acts xxv. 3, that, even in ancient times, walls were plastered over with gypsum or lime.

¹⁵ Hasselquist's Journey to Palestine, p. 148.

¹⁶ Ibid. p. 163.

¹⁷ שִׁיד.

¹⁸ J. E. Faber's Hebr. Archæol. p. 390.

5. *Marble*, which is a limestone of close texture and fine grain, receives a fine polish, and is found of various colours, is several times mentioned in the Bible. The Greek translator of Alexandria, being the most ancient, and the Latin, Arabic, and Chaldee translators, following his example, render the Hebrew word *Shesh*¹⁹ (sometimes written *Shaish*, as, for example, 1 Chron. xxix. 2; Song of Sol. v. 15,) by marble generally; but the signification of the Hebrew root *Shush*,²⁰ denoting *to be white*, as well as also the circumstance, that, in the above quoted passage of the Song of Sol. the legs of *the Bridegroom*(η) are compared with it, shews that *white* marble is designated by this appellation. The columns of the King of Persia's garden-saloon were, according to Esth. i. 6, made of such marble.²¹ The Greek translator of Alexandria in this place puts *Parian marble*.²² This marble, which is found on three islands of the Greek Archipelago, viz. on Paros, Naxos, and Tinos, was held in high esteem by the ancients, on account of its brilliant whiteness; and the greatest artists of ancient Greece made use of it for those monuments of the statuary art, which still are pre-

¹⁹ שֵׁשׁ, שֵׁשׁ.

²⁰ שֹׁשׁ. Therefore, שֹׁשׁ also denotes the white Egyptian cotton, and the stuffs which are made of it.

(η) By a mere slip, *Bride* (Braut) is put in the original instead of *Bridegroom*.—*Tr.*

²¹ שֵׁשׁ עֲמֹדֵי.

²² Ἐπὶ στύλοις Παρίοις.

served as objects of our highest admiration. But the very great distance makes it improbable that this marble was used in Persia. And, besides, Persia stands in no need of foreign marble, as the country possesses marble of its own. *Chardin* says,²³ “ There are in Persia several kinds of marble, white, black, red, and white with red veins. The black is found near a hamlet, called *Sary*, in Susiana; it breaks into flakes like slate. The most beautiful marble is that which is found near *Tabris*: it is transparent, almost like pure crystal, and the light shines through flakes which are more than an inch in thickness. This marble is white, with an admixture of green, and almost as pale as an agate. It is so soft, that it may be cut with a knife, and many do, on that account, consider it as no real mineral, since it has not the hardness of an ordinary stone.” *Ker Porter*²⁴ visited the place at the hamlet of *Deygurgan*, not far from *Tabris* or *Tauris*, where there is a quarry of this marble. He found this fossil to be a kind of petrefaction, effected by the water falling from the rocks above, and that this petrefaction, gradually sinking below the surface of the earth, formed a layer of considerable depth. A kind of incrustation covers the whole extent of the mass, which, from the declivity of the hill, spreads itself in a considerable quantity over the whole plain of the valley. The marble, in its perfect consolidated state, is found a few feet below the crust in thin layers, from

²³ *Voyages en Perse*, Vol. iii. p. 358, ed. Langlès.

²⁴ *Travels*, Vol. ii. p. 527.

which the labourers break loose, long, and broad flags, which are ten or twelve inches in thickness. These are further wrought and prepared to become ornaments in the saloons of great people: the lower part of the walls round about nearest the floor is lined with them." Among the materials which David had collected for the building of the temple, marble (*Shaish*, which is the same as *Shesh*) is also mentioned, 1 Chron. xxix. 2. David may have obtained marble from Arabia, where, according to the testimony of the ancients, marble was found, whose brilliant whiteness, hardness, and fine polish, was not equalled, either by the Parian or any other marble.* Joseph relates,† that the second temple, as well as also the royal palace of Jerusalem, were built of white marble.

In the description of the floor of the Persian king's saloon mentioned above, the stones (beside the marble species *Shesh* already mentioned) with which it was inlaid, are called *Bahat*, *Dar*, and *Sochareth* or *Sechereth*.²⁵ Probably these names also denote different kinds of marble; but it cannot now be determined what kind of marble these were. The Greek translator of Alexandria puts *Emerald* for the Hebrew noun *Bahat*. J. E. Faber's conjecture is,²⁶ that the translator does not here mean the

* J. E. Faber's *Archäologie*, p. 381, note.

† *Ant. Jud. L. VIII. cap. iii. 1, 5.*

²⁵ בַּהַט וְשֵׁשׁ וְדָר וְסֹחֶרֶת

²⁶ *L. c. p. 389, note.*

precious stone bearing this name,²⁷ but *green marble*. Rabbi *Jona*, or *Abulwalid*, who, in the twelfth century, composed a Hebrew dictionary, explains *Bahat* by the Arabic words *Rucham* and *Balant*,²⁸ of which the former denotes *white marble*, and the latter a stone resembling marble, used for floors. It is obvious that R. Jona merely states his own conjectures. The Arabic language has, indeed, a name for a stone (viz. *Baht*²⁹) resembling the Hebrew; but the Arabic dictionary, *Kamus*, merely states that this word denotes "a known stone."³⁰

The Hebrew word *Dar*, which appears, Esth. i. 6, immediately after *Shesh*, as the name of one of the stones in the floor, denotes a large pearl in the Arabic language.³¹ Indeed, the ancients made use even of pearls to decorate the walls of apartments in their palaces;³² but that pearls were used also for the

²⁷ Seneca's Epist. 86. *Eo deliciarum pervenimus, ut nisi gemmas, &c.* shews that the ancients employed even precious stones in the ornaments of their floors, which resembled Mosaic. And Apuleius says of the floors in the chambers of Psyche, *Metamorph. L. VI. Pavimenta ipsa lapide pretioso caesim diminuto in varia picturae genera discriminabantur.*

²⁸ بلنت, رخام, in Gesenius Thesaur. Ling. Hebr. p. 182.

²⁹ بهت

³⁰ P. 176 in the Calcutt. Edit.

حجر م

³¹ در

³² Bochart's Hieroz. P. II. L. V. Cap. 8. T. iii. p. 649, seq. Leipzig. Edit.

floors of dining-rooms is improbable in itself, and quite unsupported by any known example. The Greek translator of Alexandria explains the Hebrew word by a stone resembling pearls,³³ by which designation probably, as J. D. Michaelis conjectures,³⁴ is meant Plinius's³⁵ *Alabastrit*, which is a kind of alabaster, having the gloss of the mother-of-pearls.

The signification of the word *Sochereth*, which is the last of the stones mentioned in Esth. i. 6, is quite uncertain. Here the ancient translators forsake us. The conjectures of modern authors merely rest on etymological, *i. e.* very insecure foundations. J. E. Faber³⁶ is of opinion, that *sochereth* denotes a *party-coloured, spotted marble*, chiefly of a red and white colour, because the Arabic word *Ashar*,³⁷ being similar in sound, signifies red, mixed with white. Others, from the analogy of the Aramaic *shohurto*,³⁸ a *black stone*, used for dying, suppose that *black marble* is meant. Because the Hebrew *sochereth*,

³³ Πιννίνον λίθον. Bochart has l. c. p. 647, shewn that these words are a translation of the Hebrew רַב־בְּרִי.

³⁴ Supplemm. ad. Lexx. Hebr. p. 460.

³⁵ Hist. Nat. Lib. XXXVI. cap. 7, 8.

³⁶ L. c. p. 380.

³⁷ أشقر, the same as أشقر, red mixed with white. It

is well known that for the Hebrew רַב־בְּרִי frequently ص is put in the Arabic.

³⁸ مِسْكِين. The root שִׁחַר, in the sense of *being black*, and words derived from it are also used in the Hebrew language.

according to its derivation, denotes a *circular body*, with serpentine *windings*, and thence socherah³⁹ signifies a round shield; A. T. Hartmann⁴⁰ conjectured, that, in the book of Esther, tortoise-shell was alluded to. But to us it appears improbable that tortoise-shells among stones were used for the decoration of floors.

6. Modern mineralogists give the name of *Alabaster* to a kind of compact solid *gypsum*,⁴¹ which is splintering and fine-grained in the fracture, pellucid at the edges, opaque, white with a shade of grey, red or brown, and often spotted or striped. But, with the ancients, the name *alabaster* denoted a box or vessel in which ointments were kept, and which were made of a mineral called *alabastrites*.⁴² This stone, which also was called *Onyx*, and which chiefly was imported from Egypt, Akarnania, and *Syria*, was employed in finer works of art, for making feet of beds, of chairs, and other furniture, but specially for ointment boxes.⁴³ Such an one is mentioned,

³⁹ סְחָרָה.

⁴⁰ "Die Hebräerin am Putztische." The Hebrew woman at her toilette, Vol. iii. p. 354.

⁴¹ "Perleb's Lehrbuch der Naturgeschichte." Compendium of Natural History, p. 96. The name seems to be of

Arabic origin. *Bassr* (بَصْر) and *Bassrah* (بَصْرَة), with the article before it, *Al-bassrah* signifies a whitish stone. From this the Greeks formed ἀλάβαστρον.

⁴² Pliny, Hist. Nat. L. XIII. Cap. 2. Unguenta optime servantur in *alabastris*, odores in oleo. Martial, L. XI. Epig. 9. Quod Cosmi redolent *alabastra*, focique deorum.

⁴³ Pliny, Lib. XXXVI. Cap. 1. p. 8. Hunc (onychē) aliqui lapidem *alabastritem* vocant, quem cavant ad vasa unguen-

Matth. xxvi. 7; Mark xiv. 3; Luke vii. 37. Even in our days the perfumers of Egypt keep their ointments and perfumes in alabaster boxes. Herodotus mentions among the presents which the King of Æthiopia sent to Cambyses, an alabaster box with ointment;⁴⁴ and Theocritus speaks of “gilt alabasters, with Syrian ointment.”⁴⁵ In 2 Kings xxi. 13, the Greek translator of Alexandria puts ἀλάβαστρον for a Hebrew word⁴⁶ denoting a *flat dish*. Probably such dishes were made of alabaster.

7. In common parlance, we apply the name of *Crystal* to a glass-like transparent stone, commonly of a hexagonal form, which, being found in rocks, is on that account, by mineralogists, called *Rock-crystal*. It is a stone of the flint family; the most refined kind of quartz. The Hebrew language designates it by two names, which properly denote *Ice*, viz. *Kerach*⁴⁷ and *Gabish*.⁴⁸ The Greek name *Kry-*

taria, quoniam optime ea incorrupta servare dicitur. And L. XXXVII. 10. Alabastritis etiam gemma est, nascens in Alabastro Aegypti, et in Syriae Damasco, candore interstincto variis coloribus. The city of Alabastrum, mentioned by Pliny, was situated eastward from the Nile, near the Arabic Gulph. Some considered it as belonging to Middle Egypt; others to Upper Egypt. Irwin, in his Journey through the Desert of Thebes, found mountains consisting of alabaster, porphyry, and granite.

⁴⁴ III. 20. Μύρου ἀλάβαστρον.

⁴⁵ Idyll. XV. 114. Συρία δὲ μύρον χρύσει ἀλάβαστρα.

⁴⁶ זֶלַחַת. *Zalachath*.

⁴⁷ קֶרַח, Ezek. i. 22.

⁴⁸ גַּבִּישׁ, Job xxviii. 18.

stallos, in its most proper sense, also signifies *ice*; and it was very natural to transfer that name to this colourless stone, which is as clear as water. The ancients also considered the crystal as a mass congealed from the purest water, and hardened by fire.⁴⁹ The prophet, Ezek. i. 22, in his vision of upper heaven, compares its upper vault with a magnificent crystal. Rev. iv. 6, the floor on which the throne of God was placed, and, xxii. 1, the stream of pure water which issued out of the throne, are compared with crystal.

8. *Red Bolus*, or *Ruddle*, a brownish red clay-iron stone, which communicates its colour by friction, and consequently can be used for writing, and is employed for red pencils and paint, is, according to the opinion of some interpreters, mentioned in Isa. xlv. 13. The manufacturing of an idol being here described, the prophet says among other things: That the carpenter measures it out with a line, and *makes a drawing of it with ruddle*; and thus Luther has also translated. But this explanation of the Hebrew word *Sered*⁵⁰ is merely founded on a faint resemblance to the word *Sardon*, which denotes a precious stone of a bloody red colour. The cognate Arabic word *Serad*⁵¹ signifies an *awl*, like that which is used by shoemakers and saddlers. The Hebrew word *Sered*

⁴⁹ Diod. Sic. Lib. II. cap. 52. Pliny, Lib. XXXVII. cap. 2.

⁵⁰ שֵׁרֵד.

⁵¹ سراد

accordingly, in all probability, denotes a pointed instrument of a similar description, with which the artist delineated on the wood, which he intended to carve, the form and outline of the image.⁵² (9)

⁵² Cfr. Bochart's Hieroz. P. II. Lib. V. cap. 7. Tom. iii. p. 623. Leipz. Edit.

(9) For שֵׁרָד (Sered), the English version puts *line*, which is merely conjectural. Dr. Rosenmüller's Arabic analogy of

سراد seems quite satisfactory to indicate the meaning of the Hebrew word, and we should accordingly correct *line*, and put instead, *awl*, or *piercer*, or *pricker*.—*Tr.*

SECTION THIRD.

PRECIOUS STONES.

EVEN in the earliest ages, certain stones which were distinguished for the beauty of their peculiar colour, for their brilliant lustre, and for their hardness and solidity, were held in higher estimation than other stones, and when their lustre and the vividness of their colours was enhanced by polish, they were considered as the most precious ornaments. In Hebrew they are called *Eben yekarah*¹ *i. e.* precious stones, also *Ebenchen*,² *i. e.* stones of gracefulness, and sometimes *Eben* simply, that is stones,³ κατ' ἐξοχήν. The Hebrews doubtless received them through the Phoenicians from Arabia, Ethiopia, and India; for, as far as we know, no precious stones are found in Palestine.

The earliest notice of certain precious stones known by the ancient Hebrews occurs in Exod. xxviii. 17—20, in the description of the breastplate belonging to the official dress of the high-priest. It contained twelve precious stones, on which the names of the twelve tribes of Israel were engraven. These then

¹ אֶבֶן יְקָרָה 2 Sam. xii. 30. 1 Kings x. 2. Ezek. xxvii.

22. The Greek expression λίθος τίμιος 1 Cor. iii. 12. Revel. xvii. 4, is entirely analogous.

² אֶבֶן-חַן Prov. xvii. 8.

³ For example Exod. xxv. 7; xxviii. 12, 17; xxxi. 5.

are the most ancient gems or cut stones known in history. Here we consider them, not as works of art, nor with any reference to their symbolical meaning, but merely as minerals. We shall treat of them in that order in which we find them with Moses.⁴ Besides the passage quoted above, they are enumerated together in three other places: viz. in Exod. xxxix. 10—13, where the execution of the plan proposed in the former passage is described. Next in Ezek.

⁴ In determining the meaning of the Hebrew names of the precious stones contained in the breast-plate, our principal guides must be; the most ancient Jewish translator, the Greek translator of Alexandria, and Joseph, who being himself a priest, must from autopsy have known the ornaments of the high priest. Both of them do also agree in almost every particular. Epiphanius, who in the year 368 was made Bishop of Salamis in Cyprus, commented on the Greek version in a separate treatise Περὶ τῶν ἑβραίων λίθων τῶν ὄντων ἐν τοῖς στολισμοῖς τοῦ Ἱερέως. Of this treatise two different texts are extant, the one more extensive, the other more concise. These are to be found in Petavius's edition of the works of this father of the church, Tom. ii. p. 25, sqq. and p. 133. (Cölln. 1662, 2 vols. fol.) Conr. Gesner has separately edited this treatise along with a Latin version and a commentary, Zurich, 1565, 8vo; and Matth. Hiller edited it with notes in his Syntagm. hermen. p. 83, sqq.; the last is the edition here made use of. Joh. Braun Prof. of Divinity at Groeningen, in his work *De vestitu Sacerdotum Hebraeor.* (2d. Edit. Amsterd. 1698, 4to.) Lib. ii. cap. 8, has instituted learned inquiries respecting the precious stones in the high-priest's breastplate; likewise Matth. Hiller Prof. of Orient. Literat. at Tübingen, in the first treatise of his *Syntagmata Hermeneutica*, Tübingen 1711, 4to; and lastly J. J. Bellerman, in his treatise entitled: "*Die Urim und Thummim die Aeltesten Gemmen,*" i. e. Urim and Thummim, the most ancient Gems. Berl. 1824. 8vo.

xxviii. 13, in the description of the magnificence of the king of Tyre, who appears adorned with the same precious stones as the Hebrew high-priest. But here in the Hebrew text, only nine stones, of those enumerated by Moses, are mentioned; for the seventh, the eighth and the ninth are omitted, and the order of the others is somewhat changed. In the ancient Greek Alexandrian translation, however, we find all the twelve stones altogether. It is difficult to determine, whether the translator has on his own authority supplied the three omitted stones, or whether the prophet, from some motive unknown to us, left out some of the stones and changed the order of the rest. * And lastly, in Revel. xxi. 19, 20, the same twelve stones are mentioned as foundation stones of the walls of the New Jerusalem. Even in our age a certain kind of rings is ornamented with these same twelve stones, which the jewellers used to call the *twelve stones of the months, and the twelve stones of health*. †

1. *Odem*⁵ is according to the Greek translator and Joseph the *Sardius*,⁶ by modern authors called

* Bellermaun (Urim und Thummim, p. 33.) has endeavoured to establish the opinion that the names of the three stones which are wanting in Ezekiel have been omitted through the carelessness of a transcriber.

† Bellermaun, l. c. p. 34.

⁵ אֶדֶם.

⁶ Σάρδιον. The Greek translator of Alexandria, probably not the same as he who translated the Pentateuch, puts the same name in Ezek. xxviii. 13. Joseph, in his description of the breastplate in Bell. Jud. Lib. V. cap. 5, § 7, agrees with the

Carnelian, from its colour (*a carne*) which resembles the colour of raw flesh, or of water in which flesh is steeped and which is clouded on the surface. The Hebrew name too is derived from a root which signifies *being red*. This stone is of the flint family—it is a kind of calcedony.⁷ The red colour of this stone is partly blood-colour, partly that of red sealing wax, and the more vivid it is in either case, in the higher estimation it is held. The ancients called it *sardius*, *i. e.* the sardian stone, because Sardis in Lydia was the place where they first became acquainted with it. They, however, considered that of Babylon as being of the greatest value.⁸ The Hebrews probably obtained the carnelian from Arabia. In Yemen, not far from the city of Damar, there is found, according to Niebuhr,⁹ a beautiful dark red carnelian, which is called *el Akik*.¹⁰ The Arabs wear it on the finger, on the arm above the elbow, in their belt before the abdomen. It is supposed to stop hemorrhage when laid on a fresh wound.¹¹

Greek version. But in the *Antiqu. Lib. iii. cap. 7, § 5*, he puts the *Sardonyx*, which is a yellowish or a yellowish-brown chalcedony, or carnelian.

⁷ Perleb's *Compend. of Nat. Hist. Vol. i. p. 68*.

⁸ Pliny, *Nat. Hist. Lib. XXXVII. cap. 7, § 31*. *Ipsa gemma vulgaris, et primum Sardibus reperta, sed laudatissima circa Babyloniam, cum lapicidinae quaedam aperirentur, haerens in saxo cordis modo.*

⁹ "Beschreibung von Arabien," *i. e.* *Description of Arabia*, p. 142, *in the original*.

¹⁰ العقيق.

¹¹ Epiphanius adopts this opinion; in *Chap. i.* he says:

2. *Pitdah*¹² the *Topas*,¹³ a transparent precious stone, having a strong glass lustre. Its prevailing colour is wine yellow of every degree of shade. The dark shade of this colour passes over into carnation red,¹⁴ rarely into lillac; the pale shade of the wine yellow passes over into greyish; and from yellowish white into a greenish white and pale green, tincal and seladon-green.¹⁵ Whether the topas in the breastplate was yellow or green can not be determined. That this stone was highly prized by the ancient Hebrews appears from Job's declaration, xxviii. 19; that wisdom is of greater value than the *topas of Cush*. (1)

Δυνάμιος δὲ ἐστὶ Θεραπευτικῆς, ᾧ κέχρηνται οἱ ἰατροὶ πρὸς οἰδήματα καὶ ἄλλας πληγὰς ὑπὸ σιδήρεα γινομένης.

¹² תֹּפֶט.

¹³ Thus the Alexandr. translator, Exod. xxviii. 17; xxxix. 10; Ezech. xxviii. 13. Job xxviii. 19, and also Joseph. The opinions of the other ancient translators, *Pareau* has stated in his commentary on the 28th chap. of Job, which is contained in his "*Commentatio de immortalitatis ac vitae notitiae, futurae, &c.* p. 333, sqq.

¹⁴ For this reason Epiphanius, chap. ii. says that the *Topas* is more red than the *Carbuncle*, ἐρυθρὸς τῷ εἶδει ὑπὲρ τὸν ἄνθρακα.

¹⁵ *Bellermann*, l. c. p. xxxix. Because many of the colours here mentioned are also found in the crysolith, several authors, mainly relying on Pliny, who in the passage above quoted gives a green colour to the topas, entertained the opinion that the topas of the ancients might be our crysolith, and conversely the crysolith of the ancients the modern topas. But this opinion *Bellermann* has ably confuted, and observed, that as the jasper, the sapphire, the emerald and the onyx of the ancients still maintain their identity in modern times, this also may be the case with the topas and the crysolith.

(1) And Job even adds, "neither shall it be valued with pure

Under the name of Cush the Hebrews comprehended the *southern countries* generally, and *Southern Arabia*,¹⁶ in particular ; the Arabic Gulph too was included in this designation. Almost in the midst of it, the *Topas Isle* was situate,¹⁷ and it is likely that topases brought from hence by the Phœnicians were called *Topases of Cush*. In Ezek. xxviii. 13, the topas is mentioned amongst the precious stones, wherewithal the king of Tyrus was decked.

3. *Bareket*,¹⁸ the Oriental Emerald,¹⁹ is the noblest kind of that mineral of the clay family which is called Corundum, has a strong glass lustre, brilliant water, and the most beautiful green colour of different shades. Some pale varieties approach to greenish white and grass green. This stone is transparent with a double refraction. Some of them are semidiaphanous, and imperfectly pellucid.²⁰ Pliny mentions twelve species

gold." Very similar is the phrase of Hafiz, though on a different subject : We quote Sir William Jones' version :—

“Than all Bokhara's vaunted gold,

“Than all the gems of Samarkand.”—*Tr.*

¹⁶ See the Author's Biblical Geography, Book I. Pt. i. p. 210, and Book III. p. 155.

¹⁷ Diod. Sicul. Book III. cap. 39. Pliny, Book XXXVII. cap. 8, cfr. Book vi. c. 29. Strabo, Book XVI. cap. 4, § 6 ; cfr. Pareau, l. c. p. 336, sqq.

¹⁸ בִּרְקַת. The root denotes *to flash like lightning*.

¹⁹ The Greek Alexandrian version puts *σμάραγδος*, in all the passages where the above mentioned Hebrew word occurs, in Exod. xxviii. 17 ; xxxix. 10 ; Ezech. xxviii. 13, and Joseph, also in both the descriptions of the breastplate alluded to here in note 6.

²⁰ Bellermann, p. 41 ; cfr. G. H. Martini's Excursus 10

of this stone,²¹ *Teifashi* too, an Arabic jeweller and author of the thirteenth century, in his book on precious stones, describes several kinds of emerald.²² He relates, that the emerald is obtained from a mountain on the confines of Egypt and Ethiopia, not far from *Aswan* or *Syene*,²³ that here the emerald is found, partly in separate pieces, like flint below the sand, and partly at the foot of the mountain in entire masses which must be broken up; that there also existed emeralds growing in a hard black stone which resembled antimony; that these had a very dark green colour and the clearest water.²⁴

4. *Nophech*,²⁵ the ancients translated by *Carbuncle*.²⁶ Under this name are comprehended several brilliant red stones of the clay family which resemble a

the 2d. Edit. of J. A. Ernesti's *Archeol. Liter.* p. 152, and also Martini's *Lectures on Literary Archaeology*, p. 78.

²¹ Book XXXVII. cap. 5, § 16.

²² In S. F. Rau's *Specim. Arab. contin. descriptionem et excerpta libri Achmedis Teifaschi de gemmis et lapidibus pretiosis*, (Utrecht 1784,) p. 96. and 99.

²³ See the author's *Bibl. Geogr.* Book III. p. 304.

²⁴ *Etienne Quatremere* has in his *Mémoires Géographiques et Historiques*, T. ii. p. 173, sqq. furnished in his translation more notices respecting the Egyptian emerald mines, from Arabic accounts not hitherto printed. With these may be compared De Roziere's *Mineralogical Observations on the Egyptian Emerald* in the "*Description de l'Égypte*," Tom. xxi. p. 144, sqq.

²⁵ נִפְךָ

²⁶ The Greek word which the Alexandrian Translators put, *Exod.* xxviii 18; xxxix. 11; *Ezek.* xxviii. 13; is ἀνθραξ, *i. e.* glowing coal which the old Latin version renders by *carbunculus*, and thence the English *carbuncle*.

glowing coal, such as the ruby, the garnet, the spinel, but particularly the *Almandin*, *i. e.* the noble oriental garnet, a transparent red stone with a violet shade and strong glass lustre. Probably it is not so hard as the ruby, which, indeed, is the most beautiful and costly of the precious stones of red colour, but, at the same time, so hard that engravings cannot easily be made in it.²⁷

5. *Sappir*,²⁸ the *Sapphire*,²⁹ a transparent stone of a beautiful sky-blue colour, and, for this reason, the floor on which is placed Jehovah's throne in heaven, is compared with this stone, Exod. xxiv. 10. Ezech. i. 26. The Sapphire of the ancient Greeks and Romans is our *Lapislazuli*,³⁰ being of a pure blue colour, and often spotted with pyrites; these spots were in former times thought to be gold. But, as no engraving can be made in this stone on account of its softness, it can not have been one of the stones in the breast-plate in which, according to Exod. xxviii. 21, the names of the tribes of Israel were engraven. The *Lapislazuli* is also of small

²⁷ "It does not appear that the ancients made engravings in rubies, probably on account of their hardness. Höfler, a modern artist, has engraved the ruby," Martini's Lectures, p. 88.

²⁸ סַפִּיר.

²⁹ The Alexandrian Translators put the Greek name Σάπφειρος in all places where the above stated Hebrew name occurs.

³⁰ See Beckmann's "Geschichte der Erfindungen," *i. e.* History of Inventions, Vol. iii. p. 182, sqq. Cfr. Rau in his *Specim. Teif.* p. 17, note; and Pareau, l. c. p. 313.

value, being opaque, and of no great lustre, not at all radiant, and even not very durable, as the spots of pyrites moulder away. No doubt, therefore, the real sapphire is meant, which is very hard, and in that quality, inferior only to the diamond and the zirkon. The ancients used much to engrave this stone.³¹ Its prevailing colour is that of Prussian blue. There exist many varieties of this, which pass over into the colour of the lapislazuli, indigo, violet, and the blue bottle-colour. Many sapphires present a six-radiated star at two opposite corners, and are on that account called star-sapphires; these are of very great value. Commonly the sapphire has a double refraction.

6. *Yahalom*³² is, according to the Alexandrian Translator³³ and Joseph, the *Onyx*, a kind of

³¹ Martini's Excurs. p. 162.

³² יהלום.

³³ Ὀνύχιον, Exod. xxviii. 19; xxxix. 11. But, in both passages, this name occupies the twelfth place, which, according to the now received Hebrew text, belongs to the *Jasper*; for it is undoubted that the jasper is denoted by the Hebrew word יִשְׁפָּה. It seems that the Greek translator in his Heb. M.S. must have found this transposition of the jasper from the twelfth to the sixth place, and of the יהלום *i. e.* the onyx, from the sixth to the twelfth place. In Ezech. xxviii. 13. *Yahalom* occupies, in the Hebrew text, the third place, but in the Greek version, (in which all the twelve precious stones mentioned by Moses are enumerated,) Ὀνύχιον is also put in the twelfth place, as in Exod. xxviii. 20; xxxix. 12. In this transposition, Joseph follows the example of the Greek Translator in both places.

chalcedony, of the flint family of minerals.³⁴ The *onyx* is not a transparent stone; but as the colour of the flesh appears through the nail (in Greek called *onyx*) on the human body, so the redish mass which is below, shines delicately through the whitish surface of the onyx. There are several varieties of this stone, according to the manner in which thin strata of different colours alternate in it; white and reddish stripes alternating, form the *sardonyx*; white and redish-grey the *chalcedonyx*; greyish-white and yellow-brown (tawny) the *memphitonyx*, &c. The onyx most esteemed by the ancients, had milk-white and brown, or white and black strata. When well polished, it has a fine lustre; it is easily wrought into a gem of great beauty. The different kinds of onyx have, from early antiquity, been used for rings, for seals and cameos, and, accordingly, they are frequently found in collections of antiques.³⁵

7. *Leshem*,³⁶ the Alexandrian translates by *Li-gyrion*; ³⁷ this word is identical with *Linkyrion*³⁸ or *Lynkur* (or *Ligure*,) and denotes the same stone as that which we call a *hyacinth*; ³⁹ this word is also put, Revel. xxi. 20, instead of the *ligure*. Epiphanius also says that the *ligure* is the *hyacinth*. This precious stone is diaphanous, red-yellow, of the quartz kind, glossy in the fracture, crystalline, hard,

³⁴ Perleb's Compend. p. 68.

³⁵ Martini's Excurs. p. 165. Lectures, p. 86.

³⁶ לִשְׁמֵט.

³⁷ Λιγύριον.

³⁸ Λιγκύριον.

³⁹ Hill in his Notes on Theophrastus on the Stones, § 50, p. 166.

and when struck by the steel, it gives fire; in the fire it loses its colour, but does not melt unless something be added to render it fusible. The prevailing colour of this stone is orange-yellow-red; which passes over, sometimes into redish-brown, sometimes into brownish and pale-red, and sometimes into imperfect pistachio-green. The hyacinth is harder than the emerald. The artists of antiquity frequently engraved it. The most beautiful hyacinths are brought from the East Indies, and particularly from Ceylon and Cambaya.

8. *Shebo*⁴⁰ is, according to the unanimous testimony of the ancients, the *Agate*.⁴¹ Under this name is comprehended a compound of minerals of the quartz and hornstone kind, which, on account of its variegated colours, is cut and polished, and wrought into every kind of ornaments. This compound commonly consists of alternate layers of chalcedony and hornstone; but there are also found in it flint, jasper, carnelian, amethyst, and quartz, and these minerals, according to the diversity of their alternation, present a variety of delineations of colour, and different degrees of transparency. The agate is very common, and the places where it is found very numerous. Pieces of it are found in the beds of most rivers in the neighbourhood of mountains. It is

⁴⁰ שבו.

⁴¹ The Greek Translator of Alexandria puts Ἀχάτης, Exod. xxviii. 19; xxxix. 12. In Ezechiel xxviii. 10, שבו is wanting in the Hebrew text, but the Greek Translator puts ἀχάτης in the same place as where it is put by Moses.

supposed that this stone has its name from the river *Achates* in Sicily, being first found on its banks.⁴² Even in the age of Pliny, the agate was no longer so highly prized as it had been in former times, and in the age of Moses.⁴³ The artists of antiquity frequently made use of the agate for rings and gems, and they endeavoured to make use of the natural delineations in the stone, and of its different veins and colours, for different figures, and for the several parts of the same figure.⁴⁴

9. *Achlamah*,⁴⁵ the Amethyst,⁴⁶ a kind of a fine blue transparent quartz. The prevailing colour is violet, passing over into plum-blue, greyish-blue, and in oriental amethysts, also into purple-red. It is found not only in a crystalline form, but also, specially in the east, in the shape of pebbles. The best amethysts are brought from Arabia and Armenia.⁴⁷ The ancients polished them, and made use of them for rings and cameos, because they are, as Pliny observes, easily cut.⁴⁸ The ancients believed that the amethyst afforded a protection against drunkenness, and dis-

⁴² Pliny's Nat. Hist. Lib. XXXVII. cap. 10, § 54.

⁴³ L. c. Achates in Magna fuit auctoritate, nunc in nulla.

⁴⁴ Martini's Excurs. p. 166.

⁴⁵ אַחְלָמָה.

⁴⁶ Ἀμίδυσστος in the Alexandr. version, in the places mentioned in note 41. As to the other ancient versions, See *Bellermand*, l. c. p. 56.

⁴⁷ Brückmann's Abhandl. von den Edelsteinen, i. e. Treatise on precious stones, p. 138. Dutens des pierres precieuses, (Paris, 1776), p. 44. Martini, l. c. p. 157.

⁴⁸ Nat. Hist. Lib. XXXVII. cap. 9, "Sculpturis faciles."

pelled it in those who wore it or touched it ; from this circumstance it has received its name.⁴⁹ In a similar manner the Rabbins derive its Hebrew name from its supposed power to procure dreams to the wearer ;⁵⁰ because the root *Chalam* signifies *to dream*.

10. *Tharshish*,⁵¹ the Chrysolith,⁵² is a crystalline precious stone of the quartz kind, of a glassy fracture. The prevailing colour is yellowish green, and pistachio-green of every variety and degree of shade, but always with a yellow and gold lustre.⁵³ It is completely diaphanous, and has a strong double refraction. Most commonly, the chrysolith is found solid and in grains, or in angular pieces. Two species are particularly distinguished: 1. *The Noble or Oriental*

⁴⁹ Lapilli de quo quaerimus nomen factum est ex *a* privativo, et *μεθύω ebrius sum*, propterea quod eum homines, a quibus in annuli pala gestabatur, adversus ebrietatem munire credebant Graeci. Martini, l. c. p. 158. He also quotes a couple of Greek Epigrams having a reference to this subject.

⁵⁰ Thus Kimchi in his Dictionary: **והיא אבן כל מי שהיא באצבעו לעולם יראה חלומות**
He who constantly wears this stone on his finger sees dreams.

⁵¹ **תרשיש**

⁵² *χρυσόλιθος*, according to the Alexandr. Translator, Joseph, Aquila and Epiphanius. The interpretations of other ancient translators see in *Bellermann*, l. c. p. 59, sqq.

⁵³ This is expressed by the Greek name *Chrysolith*, which is composed of *χρυσός*, *gold*, and *λίθος*, *a stone*. *Bellermann* has, l. c. p. 62, proposed well founded objections against the opinion of some modern authors, who hold that the chrysolith of the ancients is our topas, and the Oriental chrysolith, the *peridot* of the French.

Chrysolith, pistachio-green; in angular pieces and crystalline; transparent, and, when held to the light in certain positions, often with a cherry-red shade. It is brought from Egypt, and is used as a precious stone of inferior value, for rings and other ornaments.

2. The *Granulous Chrysolith*, (Olivin) of different shades of yellowish-green colour, half-transparent, and nearly pellucid. The Hebrew word *Tarshish*, denotes the South of Spain, the Tartessus of the Greeks and Romans, a place to which the Phœnicians traded even in the earliest ages. Probably the Phœnicians first brought the chrysolith from Spain to Syria, and it was on that account called *Tarshish Stone*.

11. *Shoham*⁵⁴ is, according to the Alexandrian Translator of the Exodus, (xxviii. 20; xxxix. 13), and of the prophecies of Ezechiel (xxviii. 13), the *beryl*,⁵⁵ for which the Alexandrian version of Genesis ii. 12, puts the *chrysopras*, *i. e.* according to the signification of the Greek word, the *leek-green stone*:⁵⁶ by this expression, in all probability the *beryl* is designated. For the prevailing colour of this stone is pale-green, with a cast of yellow and blue. The description of the beryl given by Epiphanius,⁵⁷ perfectly corresponds with the precious stone which we call by that name. He says: This stone has the colour of the sea, it is a bluish sea-green, (for this reason it is also called *Aqua marina*), sometimes it also has the colour of the watery hyacinth. If we

⁵⁴ שֹׁהָם.

⁵⁵ Βηρύλλιον.

⁵⁶ Λίθος ὁ πράσινος.

⁵⁷ Chap. 11.

look at it holding it up to the light of the sun, we find that it looks like glass, which internally seems to have small transparent stripes. The beryl is commonly transparent, and it has, though in a slight degree, a double refraction. It is found most commonly crystalline, with the sides of the crystal longitudinally striped, more rarely solid in detached stalks. A beryl of this kind was, as Bellermann reasonably conjectures, in the breast-plate of the high-priest. "The stalky beryl, consisting of long stout hexagonal pieces, was particularly suitable for the two shoulder-stones of the breastplate, on each of which six names were engraven, these shoulder stones were also called *shoham*. Beryls are, indeed, also found, although not frequently, amongst the gems of antiquity. The *shoham*-stone is mentioned in Gen. ii. 12, as one of the productions of the country of *Chavilah*,(x) the boundaries of which were laved by the circumfluous river Pishon, one of the streams of which the sources lay in Paradise, cfr. Rosenm. Bibl. Geography, vol. i. Pt. 1, p. 202, sqq. Among the materials which David collected for the building of the temple, there also were, according to 1 Chron. xxix. 2, *shoham*-stones, Job in xxviii. 16, mentions the *shoham* as a stone of great value, placing it in

(x) Not *Havila*, (Gen. ii. 11), but with the guttural *ch*. *Chavilah*: otherwise no distinction is made between the two Hebrew letters ח and כּ, of which the sound in reality is so very different; the former being a pure aspirate, the latter an aspirate with a perfect guttural articulation, which is formed deep down in the throat. The aspiration is altogether secondary in this element; its essence is the guttural bar by which the voice is articulated.—*Tr.*

the same rank as the sapphire and the gold of Ophir.⁵⁸

12. *Yashpeh*,⁵⁹ the *Jasper*, according to the Greek Translator of Alexandria, with whom most of the other translators agree. The correctness of this interpretation is even guaranteed by the resemblance of the names. The jasper is of the flint family of minerals, and is sometimes found in formless masses, and sometimes in round lumps. It is opaque, and has a wax lustre. The prevailing colour is dusky-red, frequently with cloudy or flammeous shades. The Egyptian jasper is yellow, red and brown,⁶⁰ Epiphanius says that there are several species of jasper. "The colour of some has a greenish shade, these are more soft and imperfectly transparent. The internal mass is green, it resembles the rust of the nobler metals, and has several rows of strata. Another species is of a light sea-green colour with a paler lustre. A third kind of jasper is found in the caves of mount Ida in Phrygia; its bluish red is somewhat diaphanous, and has also a wine and amethyst colour. It is found in Iberia, Hyrcania, and near the Caspian

⁵⁸ Several modern authors, as Braun *De Vestitu Sacerdot. Hebr. l. II. cap. 17, p. 574, 2d edit.* J. D. Michaelis in his *Supplem. ad Lex. Hebr. p. 2290*, and Pareau *Commentat. de immortalitatis notitiis, p. 311*, are of opinion that שְׁהָם

is the *onyx*; but to such an opinion, they are led by unsatisfactory etymological reasons. The most ancient, and the most important authorities are for the beryl, cfr. Bellermand, l. c. p. 64.

⁵⁹ יֶשֶׁפֶה.

⁶⁰ Perleb's *Compend. p. 67.*

Sea. There is also a green jasper having no lustre, and another still resembling snow and lithomarge, which is called the old jasper." That is considered as the most beautiful species of jasper which, on a bluish-green ground, has spots of a vivid blood-colour. (χ) On account of the facility with which it is cut and polished, and its beautiful delineations, the jasper was, by the artists of ancient times, frequently cut into gems, cameos, and other ornaments.

Besides these twelve precious stones on the high-priest's breast-plate, there are found in the books of the Old Test. three other names by which it is, with more or less probability, believed that certain precious stones are designated.

1. *Shamir*,⁶¹ which is mentioned, Jerem. xvii. 1. Ezech. iii. 9. Zech. vii. 12. is, on the authority of the ancient Greek⁶² and Latin versions, supposed to denote the *diamond*. The circumstance that, in the two last mentioned passages, a hardened mind and an obstinate temper are compared to the *shamir*, seems, indeed, to render this name appropriate for the hardest of all mineral bodies. Jerem. also xvii. 1. says, that "*the sin of Judah is engraven on the tablet of their hearts with an iron stile, and with a shamir point,*

(χ) The *Bloodstone*.

⁶¹ שֶׁמֶרֶץ.

⁶² Only in Jerem. xvii. 1, however, where the Alexandrian version is completed out of another version. * In the two remaining passages no equivalent whatever is given in the Greek for the Hebrew word.

* "*Completed out of another version,*" because in the Septuagint there is a *lacuna* in Jerem. xvii. from v. 1 to 4, inclusive.—*Tr.*

and with these words the opinion is compatible that the diamond is meant, since, according to Pliny,⁶³ artists who engraved on stones, made use of small pieces of diamond set in iron for the purpose. Yet, since nowhere in the Old Test. where precious stones are under consideration, the shamir is mentioned, but everywhere spoken of as a very hard stone, it seems, as even Bochart conjectured,⁶⁴ that by this name the *emeril* (in German Schmergel, or more correctly *Smirgel*,⁶⁵) is denoted. This is no precious stone, but granulous corundum, which is found in formless pieces, pellucid only at the edges, has very little lustre, and is of a bluish-green colour. It is very hard, and it is used for cutting glass, and for polishing iron and precious stones. The *emeril*, which is found at Niris in Persia, is very hard, but loses the more of its hardness, in the smaller pieces

⁶³ Hist. Nat. Lib. XXXVII, cap. 4, § 15. Expetuntur (crustae adamantis) a sculptoribus ferroque includuntur, nullam non duritiem ex facili cavantes.

⁶⁴ Hieroz. P. II. L. VI. cap. 11. T. III. p. 843 of the Leipz. edit.

⁶⁵ The German word [like the French and English *Emeril*] is probably derived from the Greek *σμίρις* or *σμούρις*. The resemblance to the Hebrew *Shamir* is manifest, and likewise to the Arabic *سامور Samur*, which word indeed, in Golius Lexic. p. 1213, is, on the authority of an Arabic-Persian and an Arabic-Turkish Dictionary, translated *adamas*, and yet probably is in no respect different from the Greek *σμίρις*. The Arabic name for the Diamond is *ماس Mas*, and with the article *al-mas* (from which in all likelihood *adamas* has been formed) see Kamus, p. 804, Calcutta Edition.

it is broken ; the Indian emeral, on the contrary, cuts so much the better the smaller the pieces are, and on that account it is considered as more valuable.⁶⁶

2. 3. In the poetic description of the new Jerusalem we read, Isa. liv. 12, that the battlements of its walls should be of *Cadcod*,⁶⁷ and the gates of *Ekdach*⁶⁸ stones. For the former of these two Hebrew words the Alexandrian Translator puts *jasper*, and for the latter *Carbuncle*. But these stones had, as we have seen above, p. 32 and 41, other names in the Hebrew language. The Greek translator of Isaiah, whose interpretations, generally speaking, are less to be relied on than those of the translator of the Pentateuch, seems to have put quite at random, the names of certain glittering stones. The former of these Hebrew words, *cadcod* occurs once more in another place, viz. Ezech. xxvii. 16, among the articles with, which the Tyrians traded. Here the Greek translator retains the Hebrew word of the text,⁶⁹ probably because he did not know its meaning. An Arabic word,⁷⁰ which is similar in sound to the Hebrew, signifies *vivid redness*.⁷¹ The

⁶⁶ Chardin Voyages en Perse T. III. p. 357, in the Edit. by Langlés.

⁶⁷ כַּדְּכֹד. ⁶⁸ אֶקְדַּח.

⁶⁹ In his MS. however, he read כַּדְּכֹד with a *Resh* both in the 2d and 4th place, which he pronounced *καρκαδ*. Cfr. Dr. Rosenm. Commentary on the passage.

⁷⁰ كَذْكَاذَة Cadscadsat.

س - - - س - - - س

⁷¹ الكمرّة الشديدة is the explanation given by Firuzabadi in the Kamus, p. 444.

oriental ruby, which has a vivid red colour, and is the most valuable of precious stones next after the diamond, might, from a similar root, have obtained its appellation.⁷² The other word *Ekdach* belongs to a root denoting to *kindle* or *to be kindled*.⁷³ This justifies the conjecture that the expression denotes a precious stone of a fiery lustre. But as this is a quality common to several precious stones, it cannot be determined, while other available testimonies are wanting, to what particular precious stone the name belongs.

⁷² More far fetched would be a derivation from כִּירוֹד *Chirood* a spark, making the word to denote a radiant precious stone.

⁷³ קִדַּח Arabic قَدَحَ *to strike fire*.

SECTION FOURTH.

METALS.

1. GOLD, in Hebrew *Zahab*,¹ has by all nations ever been considered as the noblest of metals, partly on account of its peculiar beautiful yellow colour and brilliant lustre, and partly because, in respect of weight and solidity, and, at the same time, of dilatibility and ductility, it is superior to every other metal. It is found in nature only in a native state, partly pure, and partly in combination with silver or iron. In the book of Job, chap. xxviii. 15, 16, 17, 19, gold is five times mentioned, and expressed by four different Hebrew words: 1. *Segor*,² which properly denotes *shutting up, custody*. When applied to gold, it probably denotes a thing which is kept in careful custody, a treasure, precious gold.(λ) In other passages, *ex. gr.* 1 Kings vi. 20, 21; vii. 49, 50; x. 21. 2 Chron. iv. 20, the phrase is more complete: *Zahab sagur*,³ *i. e.* treasured gold. In gene-

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¹ זָהָב, Arabic ذهب *Dsahab*, Aramaic דְּהָבָא *Dehab*.

² סָגוּר.

(λ) Quite analogous is the notion in the Greek word *κειμήλιον*, and in the Danish expression *Liggende Fæ.—Tr.*

³ זָהָב סָגוּר.

ral, *treasures* and *precious things* are expressed in Hebrew, by words whose roots signify to *conceal*.⁴ The gold which, in the above quoted passages of the first book of Kings, is called *sagur*, i. e. *locked up*, is, in 2 Chron. iii. 4, 5, called *good gold*.⁵ 2. *Kethem*⁶ is almost equivalent to *segor*, denoting that which is *concealed*,⁷ something *precious*. 3. *Zahab*, the abovementioned usual and common name for gold. 4. *Paz*,⁸ native gold,⁹ produced by nature in a pure state, and not mixed with any other metal. *Charuz*¹⁰ is also an Hebrew name for gold, but it is

⁴ Such as אִזְרָר, מִטְמוֹן, זָפוֹן.

⁵ זָהָב טוֹב. ⁶ כֶּתֶם.

⁷ The Arabic root كَتَمَ denotes to *conceal*.

⁸ פָּז.

⁹ Gesenius (Manual Dictionary, p. 671, 3d edit.) explains it by *purified gold*, taking the Heb. root in the same sense as the

similarly sounding Arabic قَصَّ, which, according to his statement, denotes to *cleanse* (of metals). The Arabic word signifies to *separate* generally. The Syriac ܦܫܘܢ, *hard*,

heavy, would be less remote (cfr. Gen. xlix. 24, וִיפֹזוּ זְרָעֵי, *and the seed shall be scattered*); accordingly, it would

be *solid, massy gold*. The German word *Gediegen*, too, with miners, signifies *compact, solid*. See Adelung's Diction. vol. ii. p. 466, 2d edit. Instead of זָהָב מוֹפָז, 1 Kings x. 18, the

parallel passage, 2 Chron. ix. 17, has זָהָב טָהוֹר, *pure gold*.

¹⁰ חָרִיז.

not so much in frequent use as *Zahab*, and it occurs chiefly in combination with silver; for example, Ps. lxxviii. 14. Prov. iii. 14; viii. 10; xvi. 16. Zechar. ix. 3. The name seems properly to indicate the glittering yellow colour of this metal.¹¹

The ancient Hebrews obtained their gold chiefly from Arabia. This even appears from the mention made of the gold of *Sheba*, and of *Ophir*, two districts of Arabia. (See Rosenm. Bibl. Geogr. vol. iii.) 1 Kings ix. 28; x. 1, 4; x. 11. 2 Chron. viii. 18; ix. 1, 10. The gold of Ophir is also mentioned, Job xxviii. 16. Ps. xlv. 10. Isa. xiii. 12. 1 Chron. xxix. 4; and Job xxii. 24, the word *Ophir* alone is put instead of the gold of Ophir. At present, indeed, no gold is found in Arabia, neither in rivers nor in mines.¹² Yet that, in former ages, many parts of Arabia had abundance of gold, is in the clearest manner attested by credible statements of ancient authors. Artemidorus of Ephesus, who lived a hundred years before the beginning of our Christian era, says,¹³ that a river in the country of the *Debes*,¹⁴ an Arabic *Nomade* (μ) tribe, carries gold

¹¹ For קָרָן denotes *sharpened, pointed*, and hence it was used of a strong lustre, perceptibly affecting the eyes, and piercing as it were.

¹² Niebuhr's Description of Arabia, p. 141.

¹³ In Strabo, Lib. XVI. cap. 3, § 18.

¹⁴ Δέβαι. This word seems to be contracted from *Deheba*, of

ذهب *Dsahab* or *Dahab*, gold.

(μ) This French word, which is of Greek origin, is technical, and, although not recognized in English, has become almost indispensable.—*Tr.*

sand in its stream ; but the natives do not understand to work the gold out of it.¹⁵ Further, he says, that in a country bordering on the last mentioned, there is gold which requires little purification ; and that it is found in small round pieces, the smallest of which were of the size of a grain of wheat, the middling as big as a medlar, and the largest like a nut.¹⁶ Diod. Sicul. says,¹⁷ that there is found in Arabia pure native gold¹⁸ of the size of a chestnut, and of radiant lustre. The same author, in another passage,¹⁹ mentions the above alluded to river in the country of the Debes, and that it conveys gold sand in such an abundance, that the silt thrown up on the banks is quite radiant with it.²⁰ To this may be added the testimony of an Arabic author,²¹ who lived in the eleventh century of our era. He states, that in the country of Yemen (*i. e.* in Southern Arabia), there are places where gold is found ; that after heavy showers of rain the gold comes to light, being cleared from the dust, and that it glitters so as to be seen at a great distance, and that it thus is easily collected.

Further, Jerem. x. 9. Dan. x. 5, *gold from U-*

¹⁵ Ῥεῖ δὲ ποταμὸς δι' αὐτῶν ψῆγμα χρυσοῦ καταφέρειν, οὐκ ἴσασι δ' αὐτὸ κατεργάζεσθαι.

¹⁶ Χρυσὸς τε ὀρυκτὸς γίνεται παρ' αὐτοῖς οὐ ψήγματος, ἀλλὰ βωλαρίων χρυσοῦ καθάρσεως οὐ πολλῆς δεομένων μέγεθος δ' ἐχόντων ἑλάχιστον μὲν πυρῆνος. μέσον δὲ μισπίλου, μέγιστον δὲ καρῶου

¹⁷ Book II. chap. 93.

¹⁸ Ἄπυρον.

¹⁹ Book III. chap. 125.

²⁰ See also Agatharchides in Photius Cod. 250, and Pliny's Nat. Hist. Lib. VI. cap. 28, 32.

²¹ *Tebresi* in his Commentary on the Ithamasa, p. 106. Freytag's edition.

*phas*²² is mentioned, and 2 Chron. iii. 6, gold from *Parvaim*.²³ It has been a subject of many fruitless conjectures, * what countries were designated by these names? It is uncertain, too, what kind of gold is meant by *Zahab Shachut*,²⁴ (1 Kings x. 16, 17. 2 Chron. ix. 15, 16.), of which Solomon caused two hundred shields to be made. *Gesenius*²⁵ is of opinion, that *mixed* or *alloyed gold*²⁶ is thus designated. The old Greek translator puts, *beaten gold*,²⁷ i. e. gold stretched out by the hammer, which might seem more probable, since, at all events, it is uncertain whether the artificial amalgamation of gold with other metals was known in Solomon's age. The purification of gold by fire is mentioned Ps. lxvi. 10. Prov. xvii. 3; xxvii. 21. Lead and antimony are

²² זָהָב מֵאוֹפֹן, and Dan. x. 5. נֶפֶת אֹפֶן.

²³ זָהָב פְּרָוִים.

* Mons. L. Marcus's conjecture in *Nouv. Journal Asiatique*, Tom. III. (Mai, 1829), p. 364: "that Ophir, Pas, Uphas and Parvaim, were districts in the gold country *Sasu*, in the interior of Africa, mentioned by Cosmas," is quite destitute of any foundation.

זָהָב שְׁחוּט.

²⁵ Hebr. Manual Dictionary, p. 830. 3d Edit.

²⁶ For the Arabic root, which corresponds with the Hebr. שְׁחַט, is, like the Hebr. מָהַל, to *circumcise*, used of a similar fraud, viz. the adulteration of wine.

²⁷ Ἐλατός. שְׁחוּט, would accordingly, through a metathesis of the consonants, be equivalent to שְׁטוּחַ, *expanded*.

commonly used for this purpose, but the ancients also made use of salt, of tin, and of barley-bran.*

Gold was, in the earliest antiquity, manufactured into utensils, trinkets, and ornaments. Abraham's steward Eliezer, presented to Rebekkah, a nose-ring of gold and a pair of gold bracelets, Gen. xxiv. 22. Joseph received from Pharaoh a gold necklace, Gen. xli. 42. Several utensils of the tabernacle, and many ornaments of the mercy-seat and the ark of the covenant, and subsequently many implements of the temple of Jerusalem, *ex. gr.* vessels for incense, and candlesticks were made of gold; and the table on which the shew-bread lay, and also the sides of the incense altar, were covered with plates of gold, Exod. xxv. 35. (o) The first record of gold being used as money, we find in the age of David, when he bought the thrashing-floor of Ornan, 1 Chron. xxi. 25.

2. *Silver*, in Hebrew *Keseph*,²⁸ is white,²⁹ it has a strong lustre, it is elastic, its sound very clear, its dilatibility and ductility great, and it is smelted without much difficulty. It is found native, and in com-

* See Scheucher's *Physica*, S. Jobi, p. 147.

(o) Here a quotation should be supplied, viz. 1 Kings vi. 22.—*Tr.*

²⁸ קֶסֶף.

²⁹ This metal has its Hebrew name from its white colour, [cfr. *Love's Labour is Lost*.—"Lady smocks all silver-white."] For the root קֶסֶף denotes, *to be pale*; and, consequently, קֶסֶף *paleness, whiteness*. Similarly, the Greek ἀργύριον, (and thence the Latin *argentum*,) is derived from ἀργός *white*. Cfr. A. Schultens' *Clavis Dialector*, p. 260.

bination with other metals, with brimstone, and with acids. In respect of value, it is nearest to gold ; and, for this reason, it is frequently mentioned in juxtaposition with gold in the Bible. Silver has, as it is expressed in Job xxviii. 1, its *galleries*,³⁰ *i. e.* its veins, layers, and pits, in which it lies, and out of which it is brought to light ; for this metal is seldom found in entire pieces, but in all manner of stones, and as it were in veins, which, from a common source, spread out in many branches. Silver is purified by fire, by which it is separated from alloy, or drawn off by the lead in the crucible ; such a combination is called silver-dross or silver-leaf, Ps. xii. 6 ; [xvi. 10.] Prov. xvii. 3 ; xxvii. 21. Ezech. xxii. 22. Zechar. xiii. 2. The separated silver is called *purified silver*.³¹ 1 Chron. xxx. 4. Ps. xii. 6. Prov. x. 20. Silver was brought from Spain to Tyre, according to Ezech. xxvii. 12 ; and silver beaten out into plates was also brought from Spain,³² Jerem. x. 9. That silver was, even in the earliest ages, manufactured into all kinds of utensils, appears from Gen. xlv. 2, 8, where Joseph's silver cup is mentioned ; and from Exod. xii. 35, where the silver utensils of the Egyptians are spoken of. Among the contributions made by the princes of the Hebrew tribes to the building of the tabernacle, there were,

³⁰ מוֹצֵא, properly a place out of which something issues, as *ex. gr.* a well. Isa. lviii. 11.

³¹ בְּסֵף מִזְקָק.

³² בְּסֵף מִרְקָע מִתִּישׁוּשׁ.

according to Num. vii. 13, silver chargers of considerable weight. The trumpets, at the sound of which the people were assembled, were made of silver, Num. x. 2. The earliest record in the Bible of silver being used as money, occurs in Gen. xx. 16, where it is stated, that Abimelech, king of Gerar, paid to Abraham, a thousand shekels of silver. These were not a coin, but pieces of silver, which were weighed out to the receiver of payment. Thus Abraham, (Gen. xxiii. 16,) weighs out the purchase money for a field; and we do nowhere find mention made of silver counted out, but always weighed. Even shortly before the conquest of Jerusalem by Nebuchadnezzar, Jeremiah buys a field, and weighs the purchase money which was agreed upon, to the vendor, Jerem. xxxii. 16.

3. *Bezer*³³ (Job. xxii. 24, 25.) denotes *a piece of gold or silver-ore* in its raw state. Its proper signification is *abscission* or *breaking off*, and from thence *something that is broken off*. In a similar manner, the Arabic word *Tebr*,³⁴ which has the same original signification, also denotes a piece of a gold or silver-ore, and also a rough unpolished precious stone.

4. *Copper* or *Brass*, in Hebrew *Nechosheth*,³⁵ is

³³ בֶּזֶר.

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³⁴ تَبْر. See Gesenius's Preface to his Hebrew Manual

Diction. p. xiii. 3d Edit. note, and the same author's Thesaur. Ling. Hebr. p. 230.

³⁵ נְחֹשֶׁת.

seldom found native, like gold or silver, or in pieces like iron ; but most commonly in pyrites, quartz, or spar. It has a peculiar red colour, with a strong lustre, and is remarkably hard, elastic, clear-sounding, very dilatible and ductile, difficult to smelt, but easily oxydized, and soluble in most acids.³⁶ In the earliest ages, copper was employed for all those purposes for which iron was subsequently used. Arms, instruments of agriculture and of mechanical arts ; and domestic and temple-furniture were made of copper. The discovery of manufacturing iron was made last. Therefore, Hesiod³⁷ says of the men of the copper age :

Their weapons were of brass, and also their dwelling,

And they worked in brass ; and the dark iron did not exist.

The Homeric poems, too, put it beyond a doubt that, at the time of the Trojan war, iron was little or not at all in use.³⁸ The ancient Hebrews had arms, armour, shields, and helmets of copper, 1 Sam. xvii. 5, 6, 38. 2 Sam. xvi. 21.(ξ) 1 Kings xiv. 27.

³⁶ Perleb's Compend. p. 120.

³⁷ Opera et Dies, v. 149, sq. Lucret. de rer. nat. L. V. vs. 1285, seq.

Posterius ferri vis est, aerisque reperta,

Et prior aeris erat, quam ferri cognitus usus.

³⁸ Cfr. Frith's Antiqq. Homer. p. 482, Stöber's Edit. : and Goguet on the Origin of Laws, Arts, and Sciences, Vol. I. p. 158, Germ. Transl.

(ξ) The English version has *bow of steel*, both in this place, and also in Ps. xviii. 34, (which is 35 in the Hebrew Bible), but that translation is incorrect:—there is the same mistake in Job xx. 24. The original undoubtedly says *bow of brass* in all these places. The Hebrew name for steel is פִּלְדֵּי, —

Job, in xx. 24, speaks of a copper bow ; and when the Philistines made Samson captive, they bound him with chains of copper, Judg. xvi. 21. The two columns in the vestibule of the Temple of Solomon, (1 Kings vii. 13—21,) and the large bath which was placed in the sacerdotal vestibule of the temple, and which was called the *molten*, or the *copper-sea*, (2 Kings xxv. 13. 1 Chron. xviii. 8,) were made of copper ; and, according to 2 Chron. iv. 16, the pots, shovels, and forks used at sacrifices, were made of *polished copper*,³⁹ and likewise the mirrors which the women offered as contributions to the copper-bath in the tabernacle, Exod. xxxviii. 8. cfr. Job xxxvii. 18. Amongst the presents which the King of Persia made to the temple, and which were to be employed for its restoration, Ezra, in viii. 27, mentions two vessels of *copper shining like gold, and as precious as gold*.⁴⁰ This appears to be the same metal as that which the Greeks and Romans called *Orichalkon* and *Aurichalcum*.* There were two kinds

Pa'dah, or בַּרְזֵל מִצָּפוֹן, *Barzel mizapon*, i. e. *North-ern iron*.—*Tr.*

³⁹ נְחֹשֶׁת מְרוֹק.

⁴⁰ כְּלֵי נְחֹשֶׁת מְצֻהָב טוֹבָה שְׁנַיִם חֲמֹרֹת
בְּזָהָב. The word מְצֻהָב most probably denotes *golden*, i. e. shining like gold, being equivalent to מְזָהָב, the letters ז and ש being interchanged: the case is similar with the words זַעַק and צַעַק, *to cry*, which are equivalent.

* The Greek word *ὄρειχαλκος* literally denotes *mountain-*

of it, one natural, and the other artificial.⁴¹ The latter probably was copper changed into *brass*, by smelting it with calamine or zink-ore. But it is uncertain what kind of metal the natural orichalkon was. It is stated, that it had gold lustre, and the hardness of copper.⁴² This has given rise to the conjecture, that it was *Platina*,⁴³ which has a silver-white colour, a pretty strong lustre, very great solidity, considerable hardness, and, next after gold, the greatest dilatibility. But hitherto this metal has only been found in *South America*.(π) Amianus relates⁴⁴ that aurichalcum is brought for sale into the harbour of Adule, on the east coast of Africa (modern-Arkiko,

brass, and accordingly indicates a mineral to be found in a natural state. In the Latin *aurichalcum*, which is derived from the Greek, the first syllable *au* stands for the original *o*, these being frequently interchanged in pronunciation, [cfr. Lat. *aula*=*olla*; Lat. *auricilla*=Fr. *oreille*; Lat. *ausim*=Fr. *oser*.] The word is, therefore, not composed of *aurum* and *chalcum*, which would denote *gold-brass*.

⁴¹ See Martini's VIIth Excursus joined to Ernesti's *Archæol.* p. 182.

⁴² Servius on *Æn.* XII. 87. *Splendorem auri et aeris duritiem possidet.* Some other passages from the ancient authors see collectively in Bochart's *Hieroz.* T. III. p. 892, sqq. Leipz. Edit.

⁴³ Martini, l. c. p. 188.

(π) Martini's conjecture seems in some degree supported by Virgil's expression in the verse above quoted, "*Alboque Orichalco*; for the poet would never have characterized as white, a metal, whose colour resembled gold or copper. If the translator is not much mistaken, platina is found in Russia in great abundance, perhaps also in Spain.—*Tr.*

⁴⁴ *Periplus*, p. 45.

N. L. 15^o), in the Arabic Gulph : and that it is used for ornaments, and also instead of money. Inasmuch as several articles of Indian goods, such as ivory, rhinoceros horns, tortoise-shell and slaves, were probably in Arabic ships brought into this harbour ;⁴⁵ the aurichalcum, too, may in all likelihood have been an East India article. In a treatise ascribed to Aristotle,⁴⁶ it is stated, that there is found in India a metal, which, in pure lustre and colour, is equal to gold : that vessels of this metal had been found among the treasures of Darius ; and that their substance was recognized only by the smell which is peculiar to brass. Probably this is the same metal as that of which *Chardin*⁴⁷ relates, that it is found in Sumatra and in the Macassar Isles, that it is held in higher esteem than gold, and that only kings and princes could acquire possession of it. “ This metal,” he adds, “ is called *Calmbac*, and it is intermediate betwixt copper and gold. Its colour is pale rose red, the substance of a fine grain, receiving a beautiful polish. Gold has not such a strong and vivid lustre as this metal has.” Perhaps this metal is expressed, Ezek. i. 4, 27 ; viii. 2, by the Hebrew word *Chasmal*,⁴⁸ which, according to etymology, denotes a metal composed of copper and gold.⁴⁹ The

⁴⁵ Plin. Hist. Nat. VI. 34.

⁴⁶ De mirabilibus auscultatt.

⁴⁷ In Harmer's Observations, &c. Vol. II. p. 490, 4th Edit.

⁴⁸ חֶשְׂמַל.

⁴⁹ It seems, as Bochart conjectures (Hieroz. T. III. p. 885), that the word may be formed by contraction from two Chal-

Greek Alexandrian and the old Latin translators put *Elektrum* for the Hebrew word, and this expression denotes not only *amber*, but also a shining metal, composed of gold and silver, which was held in high esteem by the ancients.⁵⁰ The prophet Ezekiel, in the passages here quoted, compares with this metal the dazzling splendour of light, in which he beheld the heavenly apparition, by which he was initiated in his prophet's office. In the description of a similar manifestation, John, Rev. i. 15, puts for the Hebrew word *Chashmal*, the Greek *Chalkolibanos*,⁵¹ a bright shining brass.⁵² The old Latin translator interprets the Greek word by *aurichalcum*, of which we have spoken above.

The prophet Ezekiel, chap. xxvii. 13, states, that the merchants of Meshech and Thubal brought copper vessels to the markets of Tyre. See *Bibl. Geogr.* Vol. I. p. 249. *Bibl. Cab.* Vol. p.

5. *Iron*, in Hebrew *Barzel*,⁵³ which is mentioned by *Syrach* xxxi. 39, among the things most indis-

daic words נְחֹשֶׁת , instead of נְחָשׁ , *copper*, and מַלְלֵל , *gold ore*. It is possible, however, that it may signify *polished copper*, (from מַלַּל , *to rub*,) which would make it equivalent to נְחֹשֶׁת קָלִיל . *Ezech.* i. 7. *Dan.* x. 6.

⁵⁰ *Pliny. Hist. Nat.* XXXIII. cap. 3. sect. 23. *Omni auro inest argentum vario pondere,.....ubicunque quinta argenti portio est, electrum vocatur.*

⁵¹ *Χαλκολίβανος.*

⁵² According to *Bochart's* explanation, l. c. p. 894.

⁵³ בַּרְזֵל .

pensable for the life of man, is the hardest of metals, elastic, sounding, very ductile in a wire, but less dilatible in plates, very difficult to smelt, when made glowing hot capable of being forged [Fr. corroyable], easily oxydized, and soluble in all acids; its colour is light-grey, its lustre strong, and its fracture fibrous-chopped. It is to be found native, but much more frequently in ores, in the form of pyrites, oxyds, or salts. This metal is still to be found in many places in Syria. The mountains in Casruan, and in the country of the Druses, have abundance of it. Every year the inhabitants discover new pits, where the iron is found in an ochreous state.⁵⁴ It appears that in ancient times the mountains of Judea also yielded iron, since Moses (Deut. viii. 9.) says of it, that it is a land whose stones are iron. Iron from Spain and Arabia was brought to the markets of Tyre, Ezek. xxvii. 12, 19. Thubal-Cain, a descendant of Cain, is mentioned as the first who manufactured iron and copper,⁵⁵ Gen. iv. 22. However, neither in the statements respecting the erection of the tabernacle in the wilderness, nor in the records of the building of the Temple of Solomon, do we discover that iron was at all employed. Still, in Egypt iron was known and in use before the age of Moses; this appears from the circumstance, that he draws similes from its hardness, Levit. xxvi. 19. Deut. xxviii. 23, 48; and from his comparing, Deut. iv. 20, the severe thralldom which the Israelites suffered in Egypt with the glow-

⁵⁴ Volney's Journey to Syria, Vol. i. p. 233. Germ. Tran.

⁵⁵ Cfr. Das Alte und Neue Morgenland, Vol. i. p. 18.

ing fire of an oven in which iron is smelted. The bed-stead of Og, king of Bashan, was, according to Deut. iii. 11, made of iron. Moreover, instruments. (Num. xxxv. 16.) axes, (Deut. xix. 15.) and tools for cutting stones (Deut. xxvii. 5.) made of iron, are mentioned by Moses. Subsequently, arms, instruments and tools for domestic use, for agriculture and horticulture, and carpentry, &c. are frequently mentioned in almost every book of the Old Test.

It is related, 2 Kings vi. 1—6, that a disciple of the prophet Elisha, while cutting wood on the banks of the river Jordan, lost the head of his axe into the water. This loss was the more painful to the man, because he had borrowed the axe. He complained of his misfortune to the prophet, who cut a piece of wood, and cast it into the water. Immediately the iron floated on the surface, and the disciple lifted it up from thence. *Eichhorn*⁵⁶ is of opinion, that in the fact itself there is nothing miraculous; and that the miracle altogether owes its origin to the manner in which the fact had been understood and represented: that Elisha only cut a piece of wood with a slender point, in order to spit up the axe-head by its opening, and bring it up to the surface after such a manner that it seemed to swim. This explanation seems scarcely satisfactory; for as the iron, the moment it fell into the stream, must immediately have sunk to the bottom of the bed of

⁵⁶ In his treatise "On the prophetic traditions in the kingdom of Israel," in the *Allgem. Biblioth. der Bibl. Literat.* Vol. iv. p. 209.

the river, quite other means were required to bring it up again than a pointed piece of wood, by which it could not possibly be removed from the surface of the water. We leave to others the attempts of explaining the recorded fact by natural causes.

By *northern iron*,⁵⁷ which, Jerem. xv. 12, is mentioned, along with plain iron and copper, *steel* is meant, which is iron purified by smelting and forging, and thereby hardened, refined, and made more elastic. The Chalybes, who dwelt near the Black Sea, and accordingly in a northern direction from the Hebrews, were renowned for their manufacturing of steel;⁵⁸ and its Greek name is *Chalybs*. *Paldah*⁵⁹ is the proper Hebrew name for steel, Nah. ii. 4, (ג) where *steel sithes* on the war-chariots are mentioned.

6. *Tin*, in Hebrew *Bedil*,⁶⁰ a bluish white metal, with a strong lustre, very soft and fusible, is first mentioned, Num. xxxi. 22, amongst the metals which were to be purified by fire, being found amongst the prey taken from the Midianites, an Arabic tribe. Amongst the articles of commerce which the Tyrians

⁵⁷ בְּרִזְלִי מִצְפּוֹן.

⁵⁸ See Bochart's Geogr. S. P. Lib. III. cap. 12, p. 208.

⁵⁹ פַּלְדָּה, Arabic فُولَان.

(ג) The verse quoted is indeed the fourth in the original Hebrew text; but the third in the Septuagint, and in the English version. In this passage these two versions greatly disagree, both with the text, and also mutually.—*Tr.*

⁶⁰ בְּדִיל.

received from *Tharshish*, i. e. Tartessus, the southern part of Spain, there was also tin, according to Ezek. xxvii. 12. A levelling instrument of tin used by builders is mentioned, Zechar. iv. 10.

The Hebrew word *bedil* also denotes that which, in German foundries, is called *werkbley*, or simply *werk* (worklead-work), i. e. that lead which, in the smelting of the ores, has been saturated with silver, and, through resmelting, is again separated from it.⁶¹ Thus, the prophet Isaiah i. 25, makes Jehovah express himself figuratively of the Jewish people: *I will smelt away thy dross, and take away all thy tin,* [i. e. *leaden particles.*]

7. *Lead*, in Hebrew *Ophereth*,⁶² a bluish-grey, shining, very soft and fusible metal, which rarely is found native, but frequently in combination with sulphur, and with other metals. The first mention made of it in the Bible occurs in Moses's song of praise, Exod. xv. 10, in which he celebrates the passage of the Hebrews through the Arabic Gulph. He says, that Pharaoh's host (σ) *sank as lead in the mighty waters.*

⁶¹ The Romans, too, used their *Stannum* in this sense, Plin. Hist. Nat. Lib. XXIV. 16. *Plumbi nigri origo duplex est: aut enim jam provenit vena, nec quicquam aliud ex se parit, aut cum argento nascitur mixtisque venis conflatur. Ejus qui primus fluit in fornacibus liquor stannum appellatur.* Cfr. Beckmann's Hist. of Inventions, B. IV. p. 321, sqq. and his Comm. on Aristot. de mirabill. auscultatt. p. 102.

⁶² עֹפֶרֶת.

(σ) *Pharaoh's host*, or *the enemy*, not "*horses and chariots*," as put by Dr. Rosenmüller. The nearest grammatical sub-

Before the use of quicksilver was known, lead was used⁶³ for the purpose of purifying silver, and separating it from other mineral substances. To this refers the figure, by which the prophet Jeremiah pourtrays the total corruption of his people. He says in vi. 29: “*In their fire the lead is consumed [in the crucible]; the smelting is to no purpose, for the evil is not separated.*” Ezekiel, in chap. xxii. 18, sqq. making use of the same figure, thus amplifies it, and brings it out more fully: “The house of Israel has become a dross to me; all are copper, tin, iron, and lead in the furnace, they have become silver dross. Therefore, thus saith the Lord God: Because all of you have become dross, therefore, behold, I will gather you together in Jerusalem, as they put silver, copper, iron, lead and tin together into the furnace, and blow fire upon it, and smelt it; even so will I too, in mine anger and fury, gather you, and cast you together, and smelt you.” cfr. Mal. iii. 2, 3.

Job, in chap. xix. 23, 24, wishes that his words were engraven with an *iron pen and lead*. These

ject is in v. 9, but by mere oversight he has gone back to v. 4 for it.—*Tr.*

⁶³ Plin. Hist. Nat. Lib. XXXIII. cap. 31. Excoqui argentum non potest nisi cum plumbo nigro, aut cum vena plumbi. Long before Pliny's time, Theognis, who lived nearly 600 years before Christ, mentions the use of lead for the purification of gold. Γνώμαι, v. 1101.

Εἰς βύσανον δ' ἐλθὼν, παρατριβόμενός τε μολίβδῳ
Χρυσὸς ἀπεφθός ἐων, καλὸς ἀπασιν ἔσῃ.

. e. “Brought into the crucible, rubbed off by lead, when it has become pure gold, it seems beautiful to all men.”

words are commonly supposed to mean engraving on a leaden tablet: and it is undeniable that leaden tables were used as a writing material. Pausanias relates,⁶⁴ that he had seen in Bœotia, Hesiod's didactic poem, entitled "Works and Days," engraved on leaden tablets; but that the writing, on account of its antiquity, had been for the most part illegible. According to Pliny,⁶⁵ public records were engraven on lead. The words of Job, however, at the same time admit of this interpretation: that molten lead was to be poured into letters sculptured on stone with an iron chisel, in order to raise the inscription, and render it more easily perceptible to the eye.(τ)

In order to represent typically that idolatry to which the Jewish people formerly had been devoted, was now, through the punishment of their captive

⁶⁴ Book. IX. cap. 31. See also J. N. Funk de Scriptura Veter. (Marb. 1743), p. 44, sqq.

⁶⁵ Hist. Nat. Lib. XIII. cap. 11.

(τ) Here the English version, although not very clearly expressed, seems to agree with Dr. Rosenmüller's interpretation. These are the words of the Engl. Bible: "That they were graven with an iron pen and lead in the rock for ever." Quite differently the Septuagint: *Ἐν γραφείῳ σιδηρῶ καὶ μολίβδῳ, ἢ ἐν πέτραις ἐγγλυφῆναι*, i. e. "That they were sculptured by an iron pen and lead, or hewn into rocks." The poetic force of the passage appears to the Transl. to be unobserved by the interpreters. Job seems not here to draw his image from any thing he had actually seen executed: he only wishes to express in the strongest poetic language, the durability due to his words; and accordingly, he says, "May the pen be of iron, and the ink of lead, with which they are written on an everlasting rock." Let them not be written with ordinary perishable materials.—Tr.

abduction into foreign lands from the country of their ancestors, entirely banished, the prophet describes, Zechar. v. 5—8, a vision in which idolatry appeared to him in the form of a female demon sitting in an Ephra-measure. But an angel thrust her back into the tub, and cast a *mass of lead* on its opening,^{65b} so that she could never rise up again.

A weight of lead, called *Anach*,⁶⁶ which is the Arabic word for lead,⁶⁷ is mentioned in Amos vii. 7, 8, and in Acts xxvii. 28, a plummet for ascertaining the depth of the sea, and the nature of the bottom.

8. Antimony or Stibium, in Hebrew *Puch*,⁶⁸ is white like tin, and shining, of a leafy texture, not very hard, but very fusible; in great heat it entirely evaporates. The people of the East prepare from this metal a black powder, called *Kohol*,⁶⁹ with which the women even yet die their eyes, in order that at a distance, or by candle light, they may seem much blacker and larger than they really are. This always formed a part of the toilet of Asiatic women. Jezebel “put,” as it is expressed, 2 Kings ix. 30, “*her eyes into antimony*,”⁷⁰ i. e. she painted them with *Kohol*.⁷¹ See also Jerem. iv. 30. Ezech. xxiii. 40, (and

^{65b} עִפְרַת, v. 7, and אֶבֶן הָעִפְרַת, v. 9.

⁶⁶ אַנַּךְ.

⁶⁷ أَنْك.

⁶⁸ פּוּךְ.

⁶⁹ In Arabic كحل. Hence the Hebrew verb כָּחַל, which, in Ezech. xxiii. 40, is, by the Alexandrian, translated στιβίζειν.

⁷⁰ Ἐστιβίσατο τοὺς ὀφθαλμοὺς αὐτῆς, says the Alexandrian translator.

⁷¹ Shaw (Travels, p. 229, Germ. Transl.) and Russel (Nat.

“Das Alte und neue Morgenland,” *i. e.* the Oriental Countries in Ancient and Modern Times, Vol. iv. p. 208.)

In the poetic portraiture of the New Jerusalem, Isa. liv. 11. we read that *the stones* of its walls *should be set in antimony*. The poet probably alluded to the splendour of this metal, which was to serve as mortar in joinings of the stones, in order to give the stronger relief to their lustre; for these were to be no ordinary stones, but precious stones.(*v*)

Hist. of Aleppo, Vol. I. p. 137, note) observe, however, that the mineral from which the Kohol is prepared is not pure antimony, but a rich lead-ore, brought from Persia, and that it resembles antimony.

(*v*) The imagery of Oriental poetry is often so grotesque and gigantic, cfr. Translator's preceding note, that it is difficult to do justice to it by any European interpretation. Here, however, the New Jerusalem is, through the whole chapter, personified as a woman, and in all likelihood the *precious stones*, at least in her *battlements* (or windows) שְׁבִיטֵי.

stand for *eyes*; שֶׁשֶׁשׁ, in the singular number, denotes the sun; and the antimony, *i. e.* the black powder of that metal, not the shining metal itself, is employed, as usual, for setting off these *eyes* to greater advantage.—*Tr.*

THE
VEGETABLE KINGDOM
OF
THE BIBLE.

THE
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 BIBLE.

SECTION FIRST.

OF PLANTS IN GENERAL, THEIR CONSTITUENT PARTS,
 THEIR LIFE, AND THEIR CLASSIFICATION.

1. THE Hebrew language expresses by the word *Zemach*,¹(*α*) all that spontaneously grows out of the earth. *Nata* and *Netaim*,² are plants, which are planted and cultivated by man. *Peri-haarez*, or *Peri-haadamah*³ are *fruits of the earth*, serving for the nutriment of man, *ex. gr.* corn. The *produce of the land*, whether it be fruits of the earth, or fruits of trees, is comprehended in the appellation *Jebul-haarez*, or *Jebul-haadamah*.⁴

¹ צֶמַח.

(*α*) The Russian word *Zemla*, and Polish *ziemia* denoting earth, seems cognate with this Hebrew Term.—*Tr.*

² נִטְעִים, נִטְעֵי. ³ פְּרֵי הָאָרֶץ, פְּרֵי הָאָדָמָה.

⁴ יְבוּל הָאָרֶץ, יְבוּל הָאָדָמָה; *ex gr.* Deut. xi. 17.

Ps. lxxvii. 7; lxxxv. 13.

2. What the blood is for the animal body, that the *sap* is for the plant, by whose movement through tubes destined for the purpose, the plant obtains nutriment, and lives. This sap, the plant draws from the earth soaked with rain. Thus we read in Ps. civ. 13, that Jehovah *waters the mountains from above*, by the rain pouring down from the clouds, and immediately after : *Jehovah's trees, the cedars of Lebanon are satiated, i. e. they are full of sap and green.* From the above, it follows that corn which has begun to grow, withers away from want of sap, if the seed has fallen on a stony ground, Luke viii. 28. When, according to Matt. xxiv. 32, Mark xiii. 28, the branches of the fig-tree become sappy and put forth leaves, the approach of spring may be prognosticated.

3. The life of plants appears, partly from the general process of their developement, partly from special manifestations of energy in their particular organs. Therefore, biblical authors predicate *life* and *death* of plants as well as of animals. The prophet Hosea, xiv. 8, announces that the Hebrews who should return to their country, should *revive* the corn, *i. e.* cultivate the devastated land, and make it produce corn. I Corinth. xv. 36, the Apostle says, of a seed corn, that it is quickened when it becomes a plant. And again, Ps. lxxviii. 47, *killing* of vines and sycamore trees, by hail, is mentioned. On this passage, the Jewish interpreter R. Kimchi remarks, that death may be predicated even of plants, as there is in them a vegetative soul. For the same reason, in Job. xiv. 8, it is said of a tree, that it *dies in the earth*, and in Gen. xlvii. 19, the same expression is

used of land lying waste, which, not being cultivated, can produce no living vegetation.⁵

4. The principal organs which are developed in the greatest number of plants, are: 1. The *Root*, in Hebrew, *Sheresh* and *Shoresh*.⁶ Its growing downwards distinguishes it from the other organs of the plant. Therefore, the prophet Isaiah, 2 Kings xix. 30, comparing the Jewish nation with a tree, says that their remnant shall *take root downwards*, and bear fruit upwards. The root conveys to the plant the nutritious sap which it has sucked out of the earth. If, therefore, the root is dried up, the plant dies, Mark iv. 6. A shoot put forth from the root is called *Nezer*,^{6b} and also *Yonek*.^{6c} 2. The *Stalk*, *Stock*, or *Stem*, *Eker*,⁷ consisting of the bark, the wood and the pith is that part of the plant which grows upwards, above the ground, occupying the place between the root and the boughs. A lopped trunk, a tree yet standing in the earth, and reaching above the surface, is in Hebrew called *Gesa*.⁸ This word at the same time, is used for a stem generally, as *ex*.

⁵ The Arabs too call land lying waste ^{موات} *mawát*, i. e. ^{حيا} *dead*, and the cultivation of such they express by ^{حيا} *calling into life*. See *Analecta Arabica*, Part I. p. 12. No. 40.

⁶ ^{שֶׁרֶשׁ}, ^{שׁוֹרֶשׁ}. ^{6b} ^{נֵזֶר}. Isa. xi. 1.

^{6c} ^{יֹנֵק}. ⁷ ^{עֵקֶר}, Chald. ^{עֵקֶר}. Dan. iv. 12, 20.

⁸ ^{גִּזַּע} Job. xiv. 8. The root ^{גִּזַּע}, being equivalent to ^{גִּזַּע},

^{גִּזַּע} *denotes to cut off*.

gr. Isa. xl. 24. 3. The *boughs* are called *Badim*,⁹ also *Kezirim*,¹⁰ and *Sarapoth*,^{10b} along with the *branches*, *Anaphim*,¹¹ and also *Kippoth*,¹² *Daliyoth*,¹³ *Seiphim*¹⁴ and *Poroth*.¹⁵ *Branches with leaves* are called *Ophaim*.¹⁶ 4. The *leaves*, *Alim*,¹⁷ and *Teraphim*.¹⁸ The *foliage* of the tree generally is expressed by the word *Zammereth*.¹⁹ 5. The *top* or crown of the tree is called *Amir*.²⁰ 6. The *blossom* *Perachim*.²¹ 7. The *Fruit*, *Peri*,²² with the *Seed*, *Sera*.²³

5. In the description of creation, Gen. i. 11, 12, plants are comprehended under three grand classes, 1. *Young short grass*, *Deshe*,²⁴ which in ancient times were supposed to bear no seed.²⁵ 2. *Herbs* yielding

⁹ בְּדִים.

¹⁰ קְצִירִים.

^{10b} סַרְעָפוֹת Ezek. xxxi. 5.

¹¹ עֲנָפִים.

¹² כַּפּוֹת.

¹³ דְּלִיּוֹת.

¹⁴ סְעִיפִים.

¹⁵ פְּאֲרוֹת.

¹⁶ עֲפָאִים Ps. civ. 12.

¹⁷ עֲלִים.

¹⁸ טְרָפִים.

¹⁹ צִמְרֵת. The proper signification of this word, is *wool*

or *covering of hair*. The Jewish interpreters take it for the *tree top*. See Dr. Rosenm. Notes on Ezech. xvii. 3.

²⁰ אֲמִיר.

²¹ פְּרָחִים.

²² פְּרִי.

²³ זֶרַע.

²⁴ דְּשָׁא.

²⁵ *Theophrastus* on the plants, B. 1. cap. 5. Αἱ δὲ αὐτόματοι μὲν τῶν ἑλαττόνων, καὶ μάλιστα τῶν ἰσπετίων καὶ ποωδῶν, *spontaneously, i. e. not produced by seed, of the smaller plants, particularly the annual and graminaceous.*

seed, *Eseb*,²⁶ and 3. *Fruit trees*, *Ez-peri*.²⁷ In a subsequent passage, where the formation of the earth is spoken of, we read Gen. ii. 5, that before it rained, there grew neither *Bush*, *Siach*,²⁸ nor *Herb*, *Eseb*, on the earth. *Grass* is expressed by the Hebrew word *Chazir*.²⁹ The grass on the roofs, which grows on the flat plastered roofs of houses in the East, is used, Ps. cxxix. 6. Isa. xxxvii. 27, as an emblem of speedy destruction, because these straws of grass are small and weak, and, being in an elevated part, exposed to the scorching rays of the sun, they soon wither away.³⁰ *Aftergrass* or *fog*, is, Amos vii. 1, called *Lekesh*.³¹ Dry grass or *Hay* is *Chashash*.³² Green *Vegetables* are called *Oroth*,³³ and also *Yarak*.³⁴ Rather Chaldaic is the name *Seroim* and *Seronim*.³⁵

²⁶ יֵעֵשֶׁב מִזְרִיעַ זָרַע. ²⁷ יֵעֵז פְּרִי.

²⁸ שִׁיחַ.

²⁹ חֲזִיר, from חֲזַר, خَضَرَ, to become green.

³⁰ Cfr. Das Alte und Neue Morgenland, B. iv. p. 113.

³¹ לֶקֶשׁ, from לָקַשׁ, in the Syriac, to be late in the season.

³² חֲשִׁישׁ, as חֲשִׁישׁ from حَشَّ to be dried up, to wither.

³³ חֲזָרוֹת 2 Kings iv. 39.

³⁴ יָרַק. A dish of vegetables is in Prov. xv. 17, called גֵּן חֲיָרִק, and a vegetable garden Deut. xi. 10. אֲרֻחַת יָרֶק.

³⁵ זֶרְעָנִים, זֶרְעִים Dan. i. 12, 16.

Corn is called *Dagan*,³⁶ also *Bar*,^{36a} and *Sheber*.³⁷ The two last words are used of thrashed and warehoused corn. *Bar*, however, is sometimes also used of corn still standing in the straw, Ps. lxx. 14. *Zizim*,³⁸ are *Flowers*. *Weed* is expressed by the word *Basha*.³⁹

³⁶ דָּגָן.

^{36a} בָּר. Used in this signification the word is analogous to the Greek *σῖτος*, and the Latin *frumentum*. See Celsius Hierobot. P. II. p. 120, sqq.

³⁷ שֶׁבֶר. ³⁸ צִיִּים, צִיִּים, 1 Kings vi. 18.

³⁹ בַּאֲשָׁה.

SECTION SECOND.

GRAIN AND LEGUMINOUS PLANTS.

1. *Chittah*,¹ *Wheat*. (*α*)

THE *Wheat* is in Syria and in Egypt, the most common kind of grain, as the Rye is in colder climates ;

¹ חִטָּה, instead of חִטָּה, as the Arabic ^حخَبْزٌ from the reddish colour. Respecting this word, cfr. Celsius Herodot. P. II. p. 112. In Egypt and in Barbary *Kamich* _{س ح}

قمح, (*β*) is the usual name for wheat. See Descrip. de l'Egypte, T. xix. p. 45. Höst's Account of Maroko and Fez, p. 309. In the Hebrew, *Kemach* כֶּמֶחַ denotes the flour of wheat, Gen. xviii. 6. Num. v. 15.

(*α*) The similarity in sound between the Hebrew word *Chittah*, and the English *Wheat* is obvious. Be it remembered that the *ch* here is identical in sound with the Gaelic guttural, or the Spanish X. It is further remarkable, that the Hebrew term is Etymologically cognate with the words for *wheat* used by every one of the Teutonic and Scandinavian nations ; (thus we have in Islandic *Hveiti*, Dan. *Hvede*, Swed. *Hvete*. Moesogoth. *Hwaiti*, Germ. *Weizen* ;) and that in this instance there is no resemblance between the Scandinavian or Teutonic terms, and the Greek, Latin, or Slavonic ; (for the Greek word is *σῶρος*, the Lat. *Frumentum* or *Triticum*, the Russ.

(*β*) It seems possible that the Gaelic *Cruithneachd* may be cognate with this Arabic, and the subsequent Hebrew term *Kemach*, for several *rs* in the Gaelic seem to owe their origin merely to a guttural pronunciation.
—Tr.

in southern countries, the rye is not at all cultivated.² Palestine is mentioned, Deut. viii. 8; xxxii. 14, as a country fertile in wheat, as well as in other produce. According to 1 Kings iv. 22, (γ) the household of king Solomon required daily thirty *Cor* of fine flour, and sixty *Cor* of ordinary meal. Solomon gave to king Hiram of Tyre, twenty thousand *Cor* of wheat annually, (1 Kings v. 11,) and equally much to the workmen on Mount Lebanon, 2 Chron. ii. 9, (by the Engl. Bible, v. 10.³) In the age of the prophet Eze-

Pshienítsa, Pol. pszenica,) and yet the general resemblance between the Slavonic, the Thracian, and Gothic languages, is so strong, that no philologist does now doubt their identity of origin. From this circumstance, it seems fair to infer, that in very early ages, some kind of corn trade must have been carried on between the Hebrews and the Gothic tribes, when the latter resided near the Black Sea, or that the cultivation of wheat was introduced from Western Asia among the Goths. This is not an only instance of philology furnishing data for the culture history of mankind.—*Tr.*

² Even in Italy no rye is cultivated. *Korte* declares, (Travels, p. 168,) that no rye grows in Egypt, and *Shaw* states, (p. 351,) that rye is little known in Barbary and Egypt.

(γ) According to the Hebrew Bible, this quotation should be, 1 Kings v. 2. *Buxtorf* says that *Cor* is nearly the same as *chomer*, which is said to be about seventy-five wine gallons.

³ In this passage we read חֲטִיִּם מַכּוֹת, literally, *wheat of blows*, which commonly is supposed to mean *beaten* or *thrashed* wheat. In this case חֲטִיִּם would have been put instead of חֲטִיִּי, the *status constructus*. But, since in the parallel passage, 1 Kings v. 25, (v. 11, in the Engl. Bible,) we find

chiel, (xxvii. 17,) the Jews brought to the markets of Tyre, wheat from Minnith, a place situate in the former domain of the Ammonites, (see Bibl. Geogr. B. III. p. 47.) It is evident that this was a fertile corn country, since the king of the Ammonites had to pay to Jotham, king of Juda, a yearly tribute of ten thousand Cor of wheat, 2 Chron. xxvii. 5. The most excellent kind of wheat, or also the finest wheaten flour is, Ps. lxxxii. 17. (Engl. Bib. v. 16 ;) cxlvii. 14, called the *fat of the wheat*,⁴ and Deut xxxii. 14, the *kidney fat of the wheat*.⁵

While Isaac resided in Gerar, he commenced cultivating the land. “*He sowed in that land, and reaped an hundred fold*,” Gen. xxvi. 12. Since there

מַכְּלֵת instead of מֵאֵלֶּלֶט, *food*, (“wheat for food to his household,”) it is not impossible that in the 2d Book of Chronicles, by a transcriber’s slip, a ל may have been dropped,^(δ) and that we accordingly ought to translate: *Wheat for food to thy servants*.

⁴ חֵלֶב חֶטָּה.

⁵ חֵלֶב בְּלִיּוֹת חֶטָּה.

(δ) This conjecture is very happy indeed, it appears nearly to amount to a certainty; for, in the first place, the ל is not entirely dropped, but a ך is substituted for it, because, in all probability, the upper part of the ל had become obliterated; and in the second place, the Septuagint has, in 2 Chron. ii. 10, no word corresponding with מַכְּוֹת, nor any word which renders it probable that the Alexandrian translator had such an expression in his text, on the contrary, his version agrees much better with

מַכְּלֵת.—Tr.

is not stated *what* he sowed, *wheat* no doubt is meant, wheat being the kind of grain from which bread was most commonly made in Palestine. In the neighbourhood of Alexandria in Egypt, where the soil is extremely fertile, it was stated to Niebuhr* by some merchants resident in that city, that the wheat produced an hundred fold. However, according to accurate accounts obtained by Forskäl, † the wheat harvest yields in that country only thirty fold, and when there is much rain, about seventy fold. An Alexandrian peasant said, that he commonly reaped seven fold to fifteen fold; and that, only once, he had reaped four and twenty fold. But the same peasant asserted, that he had heard of another who once had received nine and forty fold produce. From the additional clause: "*for the Lord blessed him,*" in the passage above quoted, it appears that Isaac's hundred fold harvest was to be considered as something extraordinary. Some additional remarks on this passage will be made below, (No. 4,) in the section on *Barley*.

The prophet Isaiah xxviii. 25, says, that the husbandman *puts the wheat in rows*.⁶ These words allude to the ancient custom of not sowing but planting the wheat, which caused a more abundant fertility, as the straws in this way did not stand too closely together. Niebuhr saw in Yemen, *i. e.* Southern Arabia, fields where the maize plants ap-

* Description of Arabia, p. 154.

† Niebuhr, l. c. note.

⁶ שָׁם חָטְהָ שׁוֹרָה.

peared to be set in a row, like cabbage in Europe. He adds: "These were also the most excellent fields I ever saw. All the straws seemed to be of equal height, and no kind of weeds was to be seen amongst them."⁷

In the narrative of the plagues by which Egypt was visited, in order to compel the king to grant permission of departure to the Israelites, it is mentioned, Exod. ix. 32, that by the hail, all fruits of the field, v. 25, and even barley and flax, were smitten by the hail.⁸ For in Egypt, as well as in Palestine, it is not as with us, where wheat is sown in autumn, but barley and flax in the spring; but all these are sown in the beginning of winter, and the winter being short and mild, but the spring early, the barley commences to shoot already in the end of February, or the beginning of March, and the flax is then in the bud; but wheat, which is commonly not reaped before the month of April, is at this time very low, like short grass, without any straw.⁹

An *ear of corn* is in Hebrew called *Shibboleth*.¹⁰ The Ephraimites, who could not pronounce *sh* in

⁷ Descr. of Arabia, p. 157. Cfr. Jahn's Bibl. Archaeolog. Vol. I. B. I. p. 335.

⁸ כִּי אֶפְיֹלוֹת הֵנָּה, Luther has translated "denn es war spät Getreide," i. e. For it was a late growing corn.

⁹ See Nordmeyer's Calendar Ægypti Oeconomic. p. 29, 39. In many seasons, the wheat is reaped even in the latter end of March. Forskål, Flora Ægypt. p. 43: Hordeum cum mense Februario maturatur, triticum ad finem Martii persistit.

¹⁰ שִׁבְלֹת, Arabic سُمَّالَة Sombalath.

their dialect, substituted *Sibboleth*.¹¹ After a defeat which the Ephraimites had suffered from the Gileadites, the conquerors occupied the ford of Jordan, in order to prevent the flying Ephraimites from passing over the river. The Gileadites demanded of every one who wished to pass over, that he should pronounce the word *Shibboleth*. If he said *Sibboleth*, he was recognized as an Ephraimite and cut down, Judg. xii. 1, 6. *Abib* is another Hebrew word, denoting an *ear of corn*,^{11 b} Exod. ix. 31. Levit. ii. 14.

Ears of corn cut off before they are ripe, dried and slightly roasted in an oven, then mashed and boiled along with meat, is a common and a savoury dish in lower Egypt.¹² This, no doubt, is the same dish as that which the Hebrews called *Geres Carmel*,¹³ (*i. e.* mashed green ears, Levit. ii. 14,) or

¹¹ סְבֹלֶת.

^{11 b} אֲבִיב.

¹² Sonnini's Travels in Upper and Lower Egypt, Vol. ii. p. 19, Germ. Trans. The Arabic name of this dish is, as is

there stated, *Ferik* فَرِيك which *Golius* in his *Lexic. Arab.* p. 1793, thus explains: *fricabilis spica, cujus grana confictu exeunt, comedi idonea.*

¹³ גֶּרֶשׁ בְּרֵמֶל. The most ancient Chaldee translator, *Onkelos*, explains this expression by פְּרוֹכָן רְכִיבִין, *mashed tender*, viz. ears. The former of these two words, (*Perauchan*,) is identical with the Arabic *Ferik* mentioned in the preceding note. As it appears from the thing itself that בְּרֵמֶל denotes, a *green tender ear*; Kimchi's explanation of this word, השבלת כשהיא רכה והיא לחה עדיין is thereby confirmed.

simply *Carmel*, and which was not only offered amongst other offerings of field-fruits, (Levit. ii. 14 ; xxiii. 14,) but also used for ordinary food, as appears from 2 Kings iv. 42, where it is related, that a man from Baal-Shalisha brought to the prophet Elisha twenty barley loaves, and *Carmel*, *i. e.* green ears of wheat, in his pocket, in order to prepare them for food after the manner above mentioned.

The Hebrew word *Kali*,¹⁴ which properly signifies any thing *roasted*, in a special sense denotes *roasted ears of corn*, (cfr. Levit. ii. 14,)¹⁵ by the Germans called *Sangen*, also used by Eastern nations for food. Such the Israelites did eat at the time they entered the land of Canaan, Josh. v. 11 ; such Boaz served up for Ruth ; some of these Jesse sent to the camp, 1 Sam. xvii. 17 ; and these were brought to David and his people along with other articles of food when he encamped at Mahanaim, 2 Sam. xvii. 28. Amongst the offerings of the first fruits of every year, there were also parched ears of corn, Levit. ii. 14 ; xxiii. 14, and it was forbidden to eat them, ere an offering of them had been made to God.

Numa ordered that corn should be roasted, as he conceived it was more wholesome when so prepared ; in order to see this precept fulfilled, he determined that only what was roasted should be considered as

¹⁴ קָלִי.

¹⁵ Here is expressly put, אָבִיב קָלוֹי בְּאֵשׁ, *ears roasted on the fire.*

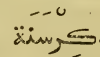
pure for a sacrifice.¹⁶ Hasselquist,¹⁷ on his journey from Acre to Sardes, found a herdsman at his dinner, consisting of half-ripe ears of corn, which he roasted on the fire.

2. *Cussemeth*,¹ *Spelt*, in German also called *Dinkel*.²

The Spelt is a kind of wheat with truncated and prickled husks, and a triangular and pointed fruit; in Exod. ix. 32, it is mentioned along with wheat, and like it, it was sown in winter, and on that account the hail alluded to in the passage above quoted, falling in the beginning of spring, did not hurt it. From Ezech. iv. 9, it appears that the Hebrews used the meal of this grain for bread-making. Dioscorides says, (II. 3,) that spelt is more nutritious than barley, and of a pleasant taste. With the Romans, this

¹⁶ Pliny Nat. Hist. Lib. XVIII. cap. 2. Numa instituit Deos fruge colere, et mola salsa supplicare, atque, ut auctor est Hemina, far torrere, quoniam tostum cibo salubrius esset. Id uno modo consequutum, statuendo, non esse purum ad rem divinam nisi tostum.

¹⁷ Journey to Palestine, p. 91.

¹ כְּסֵמֶת, . See Celsius, P. II. p. 98, sqq., and the explanation of the Hebrew word quoted from Abulwalid's Hebrew-Arabic Dictionary, by Gesenius in his Commentary on Isaiah, p. 848. J. E. Faber's Conjecture, (Analect. 1 B. p. 19,) that כְּסֵמֶת in Exod. ix. 32. Isa. xxviii. 25, denotes *Spelt*, but in Ezech. iv. 9, *Leguminous fruits*, and more especially *Chick-peas*, is untenable.

² *Triticum Spelta*, ζῖα.

was the most common grain. Even in the earliest ages, they used it as their principal food, in moises and puddings, under the name of *Adoreum*. Isa. xxviii. 25, says, that this grain is sown on the extreme border of the fields, as a kind of frame for other kinds of corn.

3. *Dochan*,¹ *Millet*.

The millet is mentioned by the Prophet Ezechiel, iv. 9, amongst the kinds of corn from which he was to make bread for himself. This plant has still the same name with the Arabs, as it had with the Hebrews; it is that kind of *holcus*, which, in many parts of Germany, bears the name of *Moor-hirsens*.² The straw is often five ells in height. The grains are oval, and flattened, of a brown colour, and as large as a grain of rice. In Arabia, this kind of millet is frequent, and it is cultivated for food by the inhabitants of the country. Forskäl saw it in Egypt at Rosetta, where it was used as food for birds. Chardin³ observes, that in Persia, and particularly in Kurdistan, bread is made of millet, when the corn of the season has been consumed. According to Tournefort,⁴ the inhabitants of the Isle of Samos, in making their bread, knead together one-half

5 0 0

¹ דָּחָן, دَحْن. Cfr. Celsius, P. II. p. 453, sqq.

² Forskäl Flora Arab. Æg. p. 174. Cfr. Oedmann's *Sammungen aus der Naturkunde*, Part V. p. 92. Germ. Transl.

³ Voyages de Perse, Tom. IV. p. 50. Langlés' Edit.

⁴ Travels, Vol. I. p. 158.

of wheat, and the other half barley and millet mixed together.

Another kind of millet is in Arabic called *Durra* ;⁵ from its meal kneaded together with butter, oil, fat, and camel's milk, the Arabs use to make a bad kind of bread, according to Niebuhr's⁶ statement, who at the same time remarks, that he always found this bread to be a very disagreeable kind of food.



4. *Scorah*,¹ *Barley*.

This is a well known kind of grain, which is to be found in many countries. According to Pliny,² it is one of the most ancient articles of human food. In Deut. viii. 8, it is stated that Palestine was fertile, also, in barley; and this likewise appears from 2 Chron. ii. 10, 15, where it is related, that Solomon gave to the workmen of the King of Tyre, twenty thousand cors of barley. The King of the Ammonites had to pay to Jotham, King of Juda, a yearly tribute of ten thousand cors of barley, 2 Chron. xxvii. 5.

The most ancient Greek version of the books of Moses states in Gen. xxvi. 12, that Isaac in Gerar

⁵  .

⁶ Descr. of Arab. p. 51. In another place (p. 151) he calls small maize, *Holcus Durra*.

¹ , from , hair, thus called from the ear resembling a brush. Cfr. Celsius, P. II. p. 239, sqq.

² Hist. Nat. Lib. XVIII. cap. 7. Antiquissimum in cibus hordeum.

reaped an *hundred fold* of barley.* Such an increase is no doubt quite extraordinary; for that reason it is also added: “*for the Lord blessed him.*” At the same time, attempts have been made to prove that such a very great increase of barley is not impossible, because, it is said, that a kind of *black* barley, very common in many countries of the East, and which for feeding cattle is even thought preferable, brings forth fruit, fifty fold and upwards.† It is in itself not improbable that Isaac, who had such an abundance of cattle, might prefer to sow this black barley rather than the common. But the Hebrew text of the passage here alluded to says nothing at all about barley; on the contrary, there, in all probability, wheat is spoken of. See above, p. 75, sq.

Barley-bread is mentioned, Judg. vii. 13. 2 Kings iv. 42. John vi. 9—13. Cfr. Ezech. iv. 9. This bread is made in Palestine of the size and thickness of a round plate, (ε) and baked in hot ashes; they

* Instead of מֵאָה שְׁעוּרִים, *hundred measures*, i. e.

hundred fold, the Greek translator, read, מֵאָה שְׁעוּרִים, and translated, ἑκατονπλείουσας κριθῶν, *hundredfold barley*. Thus also the Syriac translator.

† Niebuhr's *Descr. of Arabia*, p. 152.

(ε) These cakes are evidently like those which the Hindoos use to make for themselves of wheaten flour, and of which Major Skinner states, that they sometimes consume a dozen at a meal. This mode of preparing food undoubtedly is very ancient. In Iceland, cakes of rye-meal, somewhat smaller than those here mentioned, are made exactly after the manner here described. There, too, they are baked sometimes in

are savoury only as long as they are warm; when they are cold they are dry and hard.³

Because barley-bread was more lightly esteemed than bread made of other kinds of grain, it is in the dream of Gideon, Judg. vii. 13, a typical emblem of the small and insignificant troop of Israelites, which attacked the Midianites. Ezechiel says, xiii. 19, that the false prophets seduce the people for a handful of barley and a morsel of bread. The prophet Hosea, iii. 2, gave to the adulteress, with whom he connected himself, (and who was to be an emblem of the nation courting foreign gods,) fifteen pieces of silver, as purchase-money, and a chomer and a half of barley. Thus, also, the Muhammedans in Persia, in the contracts which they make with women whom they take only for a certain time, (which contracts are ratified before the Kadi,) pledge themselves, besides the stipulated sum of money, to pay in addition a certain measure of corn.⁴

Solomon's horses were fed on barley, I Kings iv. 28, and even yet barley is the common food for horses everywhere in the East.⁵

Barley was used for the offering, which was combined with the purgation oath, to be taken by a woman suspected of adultery, Num. v. 15. As the ordinary meal-offering consisted of wheaten flour

hot ashes, and sometimes in a pan. The former are a better kind of food than the latter.—*Tr.*

³ *Sal. Schweigger's Travels*, p. 283.

⁴ *Chardin's MS. notes in Harmer's Observations*, P. II. p. 573.

⁵ *Sonnini's Travels*, B. II. p. 29. Germ. Transl.

(Levit. iii. 1), this less esteemed kind of grain,⁶ which was employed in the purgation-offering, probably indicated in a typical manner the equivocal reputation, or the lower estimation of the person in whose behalf it was presented. For the same reason, neither oil nor frankincense was used on this occasion.

A *barley field*, in which a chomer was sown, was in the case of vows valued at fifty shekels of silver, Levit. xxvii. 16.

The *barley harvest* is mentioned, Ruth. i. 22 ; ii. 13. 2 Sam. xxi. 9, 10 : it takes place in Palestine in the end of March, and in the beginning of April.⁷ On the plain of Jericho, Mariti found the barley in April not only in the ear, but already getting yellow and ripening.* In Egypt the barley ripens almost a month earlier than the wheat.⁸ Therefore, the barley, already in the straw, was destroyed by the hail-storm, which fell in the beginning of spring, shortly before the departure of the Hebrews from Egypt, Exod. ix. 31.

⁶ Phaedrus says: "Negligunt vile hordeum." Pliny, Hist. Nat. Lib. XVIII. cap. 7: Panem ex hordeo antiquis usitatum vita damnavit, quadrupedumque tradidit relectibus. The Roman Cohorts, which had given way in battle, or lost their standards, by way of punishment, received barley instead of *wheat*. See Liv. XXVII. 13. Sueton. August. cap. 24. Dio Cassius, Book XLIX. p. 408.

⁷ Buhle's Palæstinæ Calendar. Oeconom. p. 14, 23.

* Travels, p. 416.

⁸ Sonnini l. c. *Raffencau Delile* in the *Descr. de l'Egypte*, T. XIX. p. 47.

5. *Adashim*,¹ *Lentils*.

Lentils are mentioned as an article of food, Gen. xxv. 29.—34, where it is related that Esau sold his birth-right to Jacob for a dish of lentils. It is there called a *red* dish, because the Eastern nations call *red* even that which is yellow-brown, as we speak of *red* hares, and *red* kine. The Egyptian lentils are reddish and very small.² The Greeks, too, considered the colour of lentils as reddish.³ *Pliny* compares the colour of the *red* sand around the Egyptian pyramids with the colour of lentils.⁴ *Maimonides* (ζ) describes bugs⁶ as insects of a reddish lentil colour. On the spot, where, according to a tradition preserved among the Muhammedans, the above alluded to transaction betwixt Jacob and Esau is said to have taken place, (viz. near the cave of Hebron, the sup-

¹ עֲדָשִׁים, see *Celsius*, P. II. p. 103. The Arabs in

Syria still call lentils *Addas*, عَدَس . *Russel's Nat. Hist. of Aleppo*, Vol. I. p. 96. Germ. Transl.

² *Raffeneau Delile* in the *Descr. de l'Egypte*, T. XIX. p. 65. *Bodæus a Stapel* in his *Comment. on Theophrast's work "Of Plants,"* p. 965, thus describes lentils: *Siliquæ parvæ, latae, semina in his parva, rotunda, plana, compressaque colore sub-rufa.*

³ *Celsius*, P. II. p. 105.

⁴ *Hist. Nat. Lib. XXXVI. cap. 12.*

(ζ) This *admirable Crichton* of the Jews they usually call RAMBAM, which name they say is a punishment for his heterodoxy.—*Tr.*

⁵ In his notes on the *Tract Trumoth*, Cap. 8, § 2.

posed hereditary sepulchre of Abraham and his kindred, and where the Empress Helen caused a church to be erected, Rosenm. Bibl. Geogr. Vol. II. P. I. p. 144, note 3), Arvieux* found a large edifice, in whose entrance there was a kitchen, where soup of *lentils*, and other leguminous plants, was daily prepared, which the Dervishes distributed amongst travellers and the poor. When David was flying from Absalom, lentils, amongst other victuals, were brought to him, 2 Sam. xvii. 28. Shammah, one of David's heroes, protected quite alone his field, which was sown with *lentils* and barley, against the marauding bands of the Philistines, 2 Sam. xxiii. 11. 1 Chron. xii. 13. (†) That lentils were also used for bread appears from Ezech. iv. 9. When corn rises to a very high price in Egypt, the poorer classes of the people eat bread made of lentils, amongst which there is mixed some barley-meal. It has a gold yellow colour, and is not unsavoury, but heavy.⁶

* *Merkw. Nachrichten*, i. e. Remarkable Accounts, Vol. ii. p. 196.

(†) Either Dr. Rosenmüller has had before him a text quite differently divided from ours, (which is very possible, for there are great variations in the chapter division of the Chronicles,) or here is a misquotation; for instead of 1 Chron. xii. 13, we find this passage in 1 Chron. xi. 27, according to Hahn's Hebrew Bible, the Septuagint of Lamb. Bos, and the Eng. Bible, for here all these three authorities agree. We may at the same time observe, that in 2 Sam. xxiii. 11, we find, according to the same authorities, *lentils* only, and *no barley*.—*Tr.*

⁶ Sonnini's Travels, Vol. II. p. 390.

6. *Pol*,¹ *Beans*.

Beans, as well as lentils, are a common article of food in the East. They are mentioned, 2 Sam. xvii. 28, amongst other victuals, which were brought to David when flying from Absalom. Ezechiel used beans, also, for bread making, iv. 9. Pliny likewise mentions that they were employed for such a purpose.² Maillet³ found in Egypt large fields sown with beans, whose blossoms exhaled an aromatic fragrance. They are chiefly used as food for mules, asses, and camels. In northern Africa, beans boiled and stewed with oil and garlic are the principal dish with people of all classes.⁴

¹ פול. Arab. فول. *Fol*. Russel, l. c.

² Hist. Nat. Lib. XVIII. c. 12. Inter legumina maximus honos fabae; quippe ex qua tentatus etiam sit panis. Frumento etiam miscetur apud plerasque nationes.

³ Description de l'Egypte, T. ii. p. 102.

⁴ Shaw's Travels, p. 125.

SECTION THIRD.

KITCHEN VEGETABLES AND GARDEN PLANTS USED FOR HUMAN FOOD.

1. *Oroth*,¹ *Greens*.

It is evident from 2 Kings iv. 38, 39, that the Hebrew word particularly denotes such green plants as are used for human food. It is there related, that the prophet Elisha ordered a pot to be put on the fire, for the purpose of preparing a dish, and that one of the disciples of the prophets went out into the field to gather *Oroth*. Here clearly plants are meant, which were to be boiled as a dish of vegetables: but it cannot be determined, whether eatable kitchen vegetables in general, or a particular species of vegetables are alluded to. The Syriac and Arabic translators put *mallows*⁸ for the Hebrew word.(9) The Greeks and Romans, particularly the poorer people, frequently made use of mallows for a vege-

¹ אורות. Celsius, P. I. p. 459. Cfr. Gesenius, Thesaur. Ling. Hebr. p. 55.

² خبيز; خبز.

(9) The Septuagint puts nothing at all, but only writes down the Hebrew word in Greek characters thus: ἀριώθ.—*Tr.*

table dish;³ and they are very suitable for that purpose, being mucilaginous and wholesome for food. The Bedouin Arabs eat them along with other wild vegetables.⁴ In Lower Egypt, the mallows, there called *Hebeze* (see the Arabic word, note 2), are boiled along with meat, and they are there much in use for culinary purposes.⁵ Oroth occurs, Isa. xxvi. 19, in its original and general signification, viz. *green plants*. The future restoration of the Hebrew people is there announced under the type and figure of a revival of the dead. “*Thy dew is a dew of green herbs,*” says the prophet, *i. e.* as by the dew, green herbs are revived, so shalt thou, being revived by God’s strengthening power, flourish again.

2. *Merorim*,¹ *Bitter Herbs*.

According to the command of Moses, Exod. xii. 8. Num. ix. 11, the Hebrews were to eat the lamb of the passover with bitter herbs. It is not only in itself probable, that certain kinds of herbs, which in that age were usually eaten as salad with meat, were meant; but this is also confirmed by the ancient versions, and by the tradition. The most ancient Greek A-

³ Horace says: Carm. Lib. I. Od. 31. v. 15, 16.

—— Me pascant olivae,
Me cichorea levesque malvae.

Several additional quotations, see in Celsius, l. c. p. 460, sqq.

⁴ Eugen Roger *La Terre Sainte*, p. 235.

⁵ Sonnini’s Travels, B. I. p. 263.

¹ מֵרֹרִים.

Alexandrian translator put *Endives*² for the Hebrew word: St. Jerome translates it by *wild lettuce*;³ the Chaldee translator, Jonathan, by two words which probably denote *Endives*, or some species of cichorium.⁴ In the Talmud, two other names of herbs are added, the signification of which, however, is uncertain.⁵ Modern Jews of Egypt and Arabia eat the lamb of the passover with lettuce.⁶ Aben-Ezra observes, that the Egyptians used bitter herbs in every meal, and that they did eat them along with every morsel of bread or meat.

3. *Chazir*,¹ *Leek*.²

The Hebrew word properly denotes *greens* or *grass* in general; and the word is used in that sense in several passages of the O. Test. But in Num. xi. 5, *Chazir* is mentioned as one of those Egyptian luxuries, for the enjoyment of which the Israelites

² Πικρίδης.

⁵ Lactucae agrestis.

⁴ תַּמְכָּה וְעוֹלְשֵׁין.

⁵ חֲרַחְבִּינָא, תּוֹרַת, and מְרוֹר, in the Talmudic

Tract *Pesachim*, cap. 2, § 6. Learned inquiries concerning these words, as well as also on those mentioned in the preceding note, see in Bochart's *Hieroz.* P. I. L. II. cap. 50. T. I. p. 692. Leipz. Edit.

⁶ According to *Forskål's* statement in Niebuhr's Preface to the *Descript. of Arabia*, P. XLIV.

¹ חֲצִיר.

² *Linne's Allium Porrum.* Cfr. *Celsius*, P. I. p. 263, sqq.

longed in their journey through the Arabic desert. The most ancient Greek and the Chaldee translators unanimously interpret the Hebrew word by leeks ($\pi\rho\alpha\sigma\alpha$ in Greek): and the Hebrew name above-mentioned, which properly denotes grass, is very appropriate for this plant, on account of its resemblance to grass.³ Leek was used for the purpose of seasoning meat, even in the earliest ages, and for that reason it was also employed in sacrifices.⁴ In Egypt, this plant is, in winter and spring, particularly nourishing and savoury, and it is eaten as salad to roast meat, and poor people eat it raw, with dry bread.⁵ Leek and onions were so highly esteemed by the ancient Egyptians, that Juvenal, deriding their superstition, accuses them of adoring these plants as gods.⁶

³ $\Pi\rho\alpha\sigma\alpha$, $\text{׀} \text{׀} \text{׀} \text{׀}$, and with this word agrees ܠܟܝܘܢ which

is used by the Syriac translator, and the Arabic كرفس , which latter word, according to Hasselquist (p. 562) in Egypt, still denotes the *leek*.

⁴ Athenæus Deipnos. B. IV. cap. 6.

⁵ Hasselquist, l. c.

⁶ Sat. XV. v. 9.

Porrum et cepe nefas violare, ac frangere morsu.

O sanctas gentes, quibus haec nascuntur in hortis

Numina.

Pliny however says, Hist. Nat. Lib. XIX. cap. 6, § 32, that the Egyptians revered garlic and onions as gods, and swore by them. See also Minucius Felix, cap. 28.

4. *Shumim*,¹ *Garlic*.²

The *Garlic* is mentioned along with the preceding plant, Num. xi. 5, as one of those, on account of which the Israelites in the wilderness wished themselves back to Egypt again. *Shum*, of which we find the plural number in the passage above quoted, is also in Chaldee and in Arabic the name of garlic.³ According to the testimony of the ancients, it was much cultivated in Egypt.⁴ When Hasselquist says,⁵ that the garlic which is to be had in Egypt is imported from the isles of the Archipelago, that assertion probably applies only to a certain species of the plant. The Talmud says, that the Jews season many kinds of meat with garlic;⁶ and it is notorious that they, like many other southern nations, are still very fond of it.

5. *Bezalim*,¹ *Onions*.²

Onions are also mentioned amongst Egyptian luxuries, Num. xi. 5; and that the Egyptian onions are

¹ שומים.

² *Allium sativum* Linn. Cfr. Celsius, P. II. p. 52.

³ ثوم, תום.

⁴ Celsius, l. c. p. 53, sq.

⁵ P. 562.

⁶ See the quotations in Celsius, p. 56.

¹ בצלים.

² *Allium Cepa*. Celsius, P. II. p. 83, sqq.

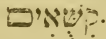
in reality most excellent, is avouched by many who have tasted them. "They are," says Hasselquist,³ "sweet in this country, whereas in other countries they are sharp and biting: here they are soft, but in the southern countries they are hard, and not easily digested. They are cut into four pieces and baked, and thus eaten, along with some pieces of roast meat. Such a meal the Egyptian Turks call Kobab. In Egypt, they also make soups of onions, cut into small pieces. Even in modern times, onions are almost the only and exclusive food of the poorest classes of the people. In the streets and markets, boiled and raw onions are sold for a very low price."⁴

6. *Kishshuim*,¹ *Cucumber* or *Gherkin*.²

Cucumbers were, like the preceding plants, amongst the Egyptian delicacies, for which the Israelites longed, Num. xi. 5. The Egyptian cucumber, which is called *Katha*,³ differs from ours, as Prosper Alpinus


⁵ Travels, p. 562.

⁴ Sonnini's Travels, Vol. II. p. 821, Germ. Transl. Cfr. Das Alte und Neue Morgenl. Vol. ii. p. 244, sqq.

¹ 

² Cucumis sativus. Celsius, P. II. p. 241, sqq.

S—

³ قثاء . Hasselquist (p. 530) pronounces the word *Chate*, which comes very near to the Syriac name for the cucumber, . The consonants of the Arabic and the Hebrew name are *the same*.()

(4) There is here a slight mistake, owing no doubt to mere oversight or haste. The consonants of the Hebr. and Arabic word are *not the same*;

remarks,⁴ by its size, colour, and softness; it has smaller, whiter, softer, and rounder leaves; and the fruit is longer, greener, smoother, softer, sweeter, and more easily digested than ours. *Hasselquist*⁵ gives the very same description of this kind of cucumber. He adds, that it grows in Kahira, after the inundation of the Nile; that it is not cultivated in any other part of Egypt; and that in no other soil it is produced of equally good quality: that it is not watery, but its pulp solid, almost like melons, of a sweet and racy taste, not, however, so cold as the water-melon; and that, in summer, it is put on the tables of the rich and of Europeans, as the most excellent and agreeable refreshment, from which no evil consequences are to be dreaded. It is evident that cucumbers were cultivated by the Hebrews in Palestine, since the prophet Isaiah, i. 8, mentions a cucumber field,⁶ with a watchman's lodge.

7. *Abattichim*,¹ *Melons*.²

These, too, are mentioned among Egyptian fruits in the passage above frequently quoted, Num. xi. 5.

⁴ De plantis Aegypti, Cap. 38, p. 54.

⁵ L. c.

⁶ מִקְשָׁה. ¹ אַבְטִיחִים.

² Cucumis Melo. Celsius, P. I. p. 356, sqq.

for, at all events, שׁ is not the same letter as ט; but as *s* and *t* are often permutable letters, it might have been said that the *elements* of the Hebrew and the Arabic word were *essentially the same*.—Tr.

No doubt, these are the fruit called water-melons;³ in French, *Pastèques*; and in Arabic, *Batech*,⁴ a name which, in its elements, is not different from the Hebrew word. Hasselquist states,⁵ that these melons are in Egypt cultivated in that fat loamy soil which remains behind after the inundation of the Nile. The very best come from the Delta, particularly from the promontory of *Burlos*. They attain a very great size: there are some of them that are three feet in length, and two feet in diameter. Under their green and smooth coat, they contain a very cold watery juice, of which a single fruit sometimes yields several pounds. In some the pulp is red, particularly near the heart; the seeds are flat, and their shell black or reddish. This seed contains a white, tender, and delicious almond, which is oily; and from the same an oil is extracted, which, contrary to the nature of other oils, is cold and very efficacious as a remedy against diseases of the skin, and against inflammations.⁶ This fruit serves the Egyptians for meat, drink, and medicine. During the season in which it is ripe, the poor eat scarcely any thing else: commonly they eat it with bread, and often quite unripe. Sonnini, however, remarks,⁷ that none of the Egyptian melons are as pleasant to the taste as the

³ *Cucumis Citrullus*, also *Anguria*.

⁴ بطيخ .
⁵ ^س ^و

⁵ *Travels*, p. 528.

⁶ *Arvieux's Accounts*, Vol. ii. p. 237. Germ. Transl.

⁷ *Travels*, Vol. ii. p. 328.

choice ones of Europe, and that, to make them palatable, they require a good deal of sugar.⁸

8. *Cammon*,¹ *Cumin*.²

The Cumin is a very common plant in every part of Europe, and its seeds have even from the earliest ages, on account of their aromatic flavour, by many nations, been used as seasoning for bread and other victuals.³ With the Hebrews it was cultivated in ploughed fields, with the same care as barley and wheat, Isa. xxviii. 25, 27. In our Saviour's age, the Pharisees paid tithes to the priests and levites from the cumin which they had reaped (Matth. xxiii. 23), although they were not bound to do so by the law of Moses.

⁸ *Sonnini* speaks of a kind of melon said to bear the name of *Abdollavi*. This name he interprets *Slave of Sweetness*. But *De Sacy*, in his notes on the French translation of *Abdollatif's* Memoirs, p. 28, has shewn that this word is an adjective formed from *Abdallah*, which is the name of a Governor of Egypt under the Khalif Mamun, in the second Decennium of the ninth century of our era, of whom it is said that he introduced into Egypt the melon above alluded to, which *Abdollatif* has also mentioned. Cfr. *Das Alte und Neue Morgenl.* Vol. vi. p. 242, sqq.

¹ כִּמְזִן, كَمُون, κύμινον.

² *Cuminum*, or *Carum Carvi*, *Celsius*, P. I. p. 516.

³ *Pliny*, Lib. XIX. cap. 8. *Condimentorum omnium stomachi fastidiis cuminum amicissimum.*

9. *Kezach*,¹ *Nutmeg-flower*; Germ. *Schwarzkümmel*,²
(i. e. *Black Cumin*.)

The *Nigella* is a garden plant, which commonly attains the height of an ell, with narrow leaves, like the leaves of *fennel*, a blue flower, out of which is formed on the very top of the plant an oblong muricate capsule, the interior of which is, by means of thin membranes, divided into cells containing a seed of a very black colour, not unlike the poppy, but of a pleasant smell, and a sharp taste, not unlike pepper,³ for which reason the Romans used to mix it with bread as a kind of spice.⁴ The Hebrews seem to

¹ קִצְצִי.

² *Nigella*, Celsius, P. II. p. 70, sqq. *Luther* translates the Hebrew word *Wicke* (*Vetch*), probably from mere conjecture. The Greek Alexandrian translator interprets קִצְצִי by μιλάνθιον, which the Arabic translator in the Polyglotts renders شونيز, i. e. Black Cumin, or the Nutmeg-flower. *Saadias* and *Abulwalid* also explain the Hebrew word by this same Arabic word. The ancient Latin version has *Git*, which denotes the same plant. The Rabbinical interpretations also agree with this; the passages are quoted by Celsius, l. c.

³ Ausonius says: Idyll. XII. Technopaegn. Monosyll. de cibis:

Est inter fruges morsu piper aequiparans git.

⁴ Pliny, Hist. Nat. Lib. XIX. cap. 8. Inferiorem crustam (panis) apium gitque cereali sapore condiunt. And Lib. XX. cap. 17: Melanthii, vel melansperini semen gratissime panes condit. Dioscorides, Book III. cap. 93. Σπίγμα μέλαν, δριμύ, εὐώδες, καταπλασσομένον εἰς ἄρτους.

have used it for the same purpose: for they cultivated it like cumin in ploughed fields. In Isa. xxviii. 25, 27, it is mentioned along with cumin.

10. *Gad*,¹ *Coriander*.²

The appearance of the manna is in Exod. xvi. 31. Num. xi. 7, compared to the seed of this plant, which was much cultivated in the gardens of Egypt. The coriander-seed is round, of the size of a pepper corn, green at first, afterwards pale-yellow or whitish. The leaves of this plant the Egyptians eat for byemeat.³ It is well known that with us the seed is a favourite kind of spice.

11. *Hædyosmon*,¹ *Mint*.²

The mint is mentioned, Matth. xxiii. 23. Luke xi. 42, as one of those herbs, of which the Pharisees, from an overstrained zeal in things not touching the

¹ גַּד.

² *Coriandrum sativum*. Celsius, P. II. p. 78, sqq. The ancient translators and the Rabbins agree as to this signification. In an ancient supplement to Dioscorides, B. III. cap. 71. fol. 364. Par. edit. of 1549, 8vo. it is stated, that the Africans, i. e. the Carthaginians, whose language, the Punic, was cognate with the Hebrew, called the coriander Γοιδ; which word is not at all different from the Hebrew *Gad*.

³ Prosper Alpinus de Plantis Æg. Cap. 42, p. 61.

¹ Ἡδυόσμον, i. e. having a sweet smell.

² *Mentha*. Celsius, P. I. p. 543.

essence of religion, paid tithes, without being bound to do so by the law. From this very circumstance, that tithe was paid of this herb (which is also very well known amongst us), it appears that the Jews in the age of Christ cultivated it as a garden plant. On account of its aromatic scent and flavour, the mint was used by the ancients in the preparation of many dishes;³ and in the cookery book of the Roman Apicius, the green, as well as the dried and preserved mint, is alluded to almost on every page. Dioscorides says that this plant is a stomachic.⁴

12. *Anethon*,¹ *Dill*.²

This plant is also mentioned, Matth. xxiii. 23, along with the preceding, as one of the garden plants of which the Pharisees used to pay tithe; it is also expressly mentioned in the Talmud amongst things of which tithe ought to be paid.³ The seeds of this plant, which with us, too, is indigenous, were, like the cumin, the coriander, and the mint, used for spicing

³ Plin. Hist. Nat. Lib. XIX. cap. 8. Grato mentha mensas odore percurrit in rusticis dapibus. And Lib. XX. cap. 14. Menthae ipsius odor animum excitat, et sapor aviditatem in cibis; ideo embammatum misturae familiaris.

⁴ Book III. cap. 41. Καὶ καθόλου ἐστὶν εὐστόμαχος καὶ ἀρτυμαντῶδες.

¹ Ἄνηθον.

² Anethum graveolens: Celsius, P. I. p. 494.

³ In the Tract. *Massroth* (of Tithes), we read (Cap. IV. § 5.): “The seed, the leaves, and the stem of Dill, (שַׁבָּת) *Shabath*, are, according to Rabbi Eliezer, subject to tithe.”

many kinds of meat, in order to give them an agreeable flavour.

13. *Peganon*,¹ *Rue*.²

This is also with us a common garden plant, of which the strong-scented and bitter leaves are used as medicine and also as a spice for meat; in Luke xi. 22, it is put instead of the dill, in the parallel place, Matt. xxiii. 25, among the plants of which the Pharisees used to pay tithe. In the Talmud, the rue is indeed mentioned amongst kitchen herbs,³ but, at the same time, it is there expressly stated, that it is tithe free, it being one of those herbs which are not cultivated in gardens, according to the general rule established in the Talmud.⁴ “Every-thing eatable, and which is taken care of, cultivated and nursed (in gardens or in ploughed fields,) and which has its growth from the earth, is subject to tithe.” It is, however, possible that in the age of Christ, some superior species of rue may have been cultivated in gardens, and thus have become subject to tithe.

14. *Sinapi*,¹ *Mustard*.²

The mustard is a shrub plant, bearing a pod,

¹ Πήγανον. ² *Ruta graveolens*. Celsius, P. II. p. 251.

³ The Tract. *Shebiith*, cap. ix. § 1.

⁴ The Tract. *Massroth*, cap. i. § 1.

¹ Σίναπι.

² *Sinapis*. Celsius, P. II. p. 253.

which contains a round seed. The mustard plant grows indeed wild in several places ; but that it was, at least by the later Hebrews, cultivated as a garden plant, is evident from this, that in the Talmud,³ its buds are mentioned amongst things which are subject to tithe, (see the next preceding article.) This plant is also cultivated with us on account of its seed, which is made use of, partly as a spice, partly for extracting oil from it, and partly as an external medicine. The later Hebrews used proverbially to compare to a mustard seed,⁴ any thing very small and insignificant. In conformity with this custom, Jesus, prophesying of the propagation of his saving doctrine, which at first gained only a small number of adherents, but afterwards would spread far and wide, thus typically expresses himself, (Matt. xiii. 12. Luke xiii. 18, 19 ;) the kingdom of heaven is like a mustard seed, which is the smallest of all seeds, but being sown in a good land, grows up and becomes a tree, in the branches of which the birds build their nests. In a proverbial simile, no literal accuracy or strictness is to be expected. And we ought, therefore, not to be surprised that the mustard seed is spoken of as being “smaller than all other seeds,”⁵ although it is well-known that

³ *Massroth*, cap. iv. § 6. *Russel* (in his *Nat. Hist. of Aleppo*) observes, that mustard is, in Syria, not much in use except with the Franks ; that abundance of it is found in a wild state ; but that it is not cultivated.

⁴ גַּרְגִּיר הַחֲרָדָל. *Garghir hachardal*. As to the proverbial use of this expression, see *Buxtorf's Lex. Chald. Talmud.* p. 822.

⁵ Ὁ μικρότερόν ἐστι πάντων τῶν σπερμάτων.

smaller seeds are to be found. As little is that observation called for, which has been made by some interpreters, that the mustard shrub sometimes grows to the height of several feet, and in a manner spreads out in branches.⁶ For these are exceptions from which it is not usual to draw similes. Jesus here merely makes use of an amplification; and such are, for the sake of emphasis, in popular addresses and similes, not unusual with any nation.

⁶ See Scheuchzer's *Physica S. T. VIII.* p. 59. Still less deserves here to be mentioned the passage quoted from the Talmud by Buxtorf, (*l. c.*) wherein a certain Rabbi Simon relates, that he has in his field a mustard-shrub, in which he uses to climb up, as if it were a tree.

SECTION FOURTH.

PLANTS GROWING WILD, FLOWERS AND SHRUBS.

1. *Abiyonah*,¹ *Caper*.²

THE Caper is the bud of a shrub which frequently grows wild in Asia, in Africa, and in Southern Europe ;³ the branches of this plant are prickled with

¹ אֲבִיּוֹנָה.

² *Capparis*. Thus, the most ancient Greek, the most ancient Latin, and the Syriac translators, interpret the Hebrew word, which occurs only once in the Old Test. viz. in Eccl. xii. 5. It is also acknowledged, that the signification given by the ancients, agrees with the context of this passage by *J. D. Michaelis*, Supplem. ad Lex. Hebr. p. 4; and by *Gesenius* Thes. Ling. Hebr. p. 123. Cfr. *J. F. Winzer's* Programmes on the *Kohemoth*, XI. 9—XII. 7. Leipz. 1818, 1819, with additions and improvements in the Commentatt. Theologg. edited by *Rosenmüller*, *Maurer* and *Fuldner*, T. I. P. I. p. 94. Leipz. 1825.

³ *Rauwolf* says (*Travels*, Vol. i. cap. ix. p. 105,) that the caper-shrub, in the neighbourhood of Aleppo, grows out of the crevices of walls, and also in stony places. And, p. 71, "in the streets and walls of Aleppo, the caper grows in such abundance, that it is held in no esteem at all; they break off the flowers before they open, and pickle them for the purpose of eating them with other food." The same traveller found in the gardens near Bagdad (Vol. ii. p. 99,) caper-shrubs

oval leaves, which are not indented, and which have short peduncles. The unopened buds of this shrub, being preserved in vinegar, are, as is well-known, used in Europe as a spice for salads and *ragouts*. The fruit of this plant, a berry-like pod, with a thick fleshy coat, containing small reddish seeds, which opens and falls off when ripe, is less known with us. In the figurative description of old age, Eccles. xii. 5, the veteran who has reached the end of his days, and daily must expect to sink into his grave, is compared to such an over-ripe caper-berry, which is nearly falling off.⁴ The reason why this plant, and no other,

which attained the height of a tree. And *Belon* saw (*Observatt.* B. ii. p. 279,) in Arabia, caper-shrubs of the height of a fig-tree.

⁴ Dioscorides, Lib. II. cap. 204. Οὐ (ἄνθις) πεισόντος εὐρίσκειται τε οἶον βάλανος επιμήκης, ὅπερ ἀνοιχθὲν ἔχει κοκκοὺς ὥσπερ ροῖᾶς μικροὺς ἐρυθρούς. In my explanation of the words

וְתִפֹּר הָאֲבִיּוֹנָה, I adhere to the most ancient, viz. the

Greek Alexandrian version: καὶ διασκειδασθῆ ἡ κάππαρις, by which, undoubtedly, is denoted the opening of the caper pod, through which the seeds are scattered. תִּפֹּר, the Hiphil

voice of the verb פָּרַר or פִּיר, here denotes to break, to

burst asunder, in an intransitive or neutro-passive sense. *Gesenius* (l. c.) indeed admits, that in this passage the fruit or the pod of the caper-shrub is meant; but he is of opinion, that these are here mentioned with reference to the provocative power of their seeds, which no longer has any effect (תִּפֹּר) on the decrepit veteran. No proof, however, can be

found, that the fruit of the caper-shrub possesses such a property, or that such has been ascribed to it. In the passage of

is chosen for this simile, probably is, that the caper-shrub is very common in Palestine, and the sight of pods which have opened, and are nearly fallen off, must of course be very frequent.

2. *Esobh*,¹ *Hyssop*.²

The Hyssop is a well-known plant for its aromatic scent and bitter taste, it also grows in Germany; its leaves are lanceolate of about an inch in length, the stalk branched from one foot to a foot and a-half in height; the flower is sometimes blue, and sometimes white. But the Hebrew word *Esobh*, does not denote our hyssop, but an aromatic plant resembling it, *the wild marjoram*, which the Germans call *Dosten* or *Wohlgemuth*, the Arabs *Zatar*,³ and the Greeks

Plutarch (*Sympos. L. IV. quæst. 4.*) quoted by Gesenius, it is only said, that many who had no appetite for eating (*πολλοὶ τῶν ἀποσίτων*), restored it by eating preserved olives and capers. But here the latter evidently denotes the unopened buds, which are also in use amongst us. No more does Pliny in the passages quoted (*Hist. Nat. Lib. XIII. 23; XX. 15.*) allude to the provocative power of the berries or the pods of the caper-shrub. Dioscorides (*l. c.*) and Ibn Sina (*Avicenna, fol. 194 of the Arabic text.*) who, with great precision, state the medical use of each part of this plant, are equally silent on the subject.

¹ עֶסוֹבֵה.

² *Hyssopus*, *Celsius*, P. I. p. 407.

³ زَعْتَر also spelled صَعْتَر. By this word Maimonides, Saadias, Abulwalid and Tanchum, unanimously explain the Hebrew word. See *Celsius l. c. p. 420*, and *Gesenius' The-*

Origanon.⁴ This plant, which is a foot in height, has a straight, strong stalk, leaves resembling the marjoram, which are covered with a soft wool; and on the top of the stalk white flowers with tile-formed bracts.⁵ It grows in many places in Palestine and Syria, also in Egypt and on Mount Sinai.⁶ In the first book of Kings iv. 33, it is said of King Solomon that he spoke of trees from the cedar of Libanon, even to the hyssop that springeth out of the wall.⁷ It is well-known that this plant loves a dry stony ground, and it frequently grows in heaps of rubbish and out of old walls.

Bunches of hyssop were, according to the Mosaic law, used as sprinkling brushes in religious sprinklings and purifications; for example, for sprinkling the door-posts with the blood of the lamb of the passover, Exod. xii. 22, for sprinkling the blood of the red heifer, Num. xix. 6, (z) for the sprinkling of the holy

saur. p. 57. As to the different varieties of the *Satar*, see J. E. Faber, in his "Analecta for the Study of Exegetical and Systematical Theology," Vol. I. Pt. I. p. 9, sqq.

⁴ *Oρίγανον*, Dioscorides, Book III. cap. 32.

⁵ Prosper Alpinus, *De Plantis Ægypti*, cap. 20, and Vesling's Notes. Cfr. Hasselquist's *Travels*, p. 517.

⁶ Burckhardt's *Travels in Syria*, p. 913.—*Germ. Transl.*

⁷ יַעַד הַחִזְזִיב אֲשֶׁר יֵצֵא בַקִּיר.

(z) This is a slight mistake, for it is not said in Num. xix. 6, that the blood of the red heifer is to be sprinkled with hyssop, but the priest was to take hyssop, and cedar, and scarlet, and throw these things into the fire in which the heifer was burning. No doubt these were to be burnt along with the heifer.—*Tr.*

water for purifying lepers, Levit. xvi. 4, sqq., and those who had touched any thing unclean. The reason why bunches of hyssop were particularly ordained to be used for such sprinklings, was probably no other than this ; that this plant, on account of its small, numerous and woolly leaves, was better than other plants suited to the purpose, because a good deal of water and blood adhered to it ; and the bunch, when wafted and shaken, easily dropped again the fluids with which it had been charged.

St. John the Evangelist relates, in chap. xix. 29 of his Gospel, that the soldiers on guard about the Saviour's cross, when Jesus cried " I thirst," dipped a sponge into vinegar, and laid it on hyssop, and thus held it to the mouth of the Redeemer. Because St. Matth., in xxvii. 48, and St. Mark, in xv. 36, in their relation of the same fact, without mentioning the hyssop, state that the soldiers dipped a sponge into vinegar, and, putting it on a *reed*, presented it to Jesus, several interpreters have been of opinion, that the reed spoken of by St. Matthew and St. Mark was the stalk of an hyssop. Against this others have justly objected,⁸ that the stalk of an hyssop would have been too weak to hold a sponge soaked in vinegar, and too short to present such a restorative up to the cross. I shall not here notice many other conjectures, which have been made concerning the hyssop in this passage of St. John.⁹ The

⁸ Ex. gr. Bochart, Hieroz. P. I. L. II. cap. 50. T. I. p. 677. Leipz. Edit. and Celsius, l. c. p. 439, sqq.

⁹ They are stated, and their merits estimated, by Celsius, l. c. and by Kuinöl in his Comm. on John xix. 29.

plain reason why the soldiers presented to the Redeemer a sponge dipped into vinegar, along with some hyssop, seems to be this, that sucking the vinegar from the sponge was to quench the thirst of which he complained, and the aromatic scent of the hyssop was to refresh and to strengthen him.

3. *Beushim*,¹ *Wild Grapes*; Germ. *Heerlinge*; ²
(Fr. *Labrusque*.)

The *Beushim* are bad grapes,³ the cultivation of which has been unsuccessful, which, on account of bad growth or bad soil, never reached maturity, but remained diminutive and sour. Jehovah says, by the mouth of the prophet Isaiah, v. 1, 2, 3, that in a vineyard he planted a vine of a precious quality, and that he hoped it would bear grapes according to its kind, but it had brought forth wild grapes. Probably the bad and useless berries of the *plum grape* are here alluded to,⁴ which appropriately is contrasted with the most precious species of vine, which is

¹ בְּאִשִּׁים.

² *Labruscæ*. Thus all the ancient translators.

³ The Hebr. word is a noun adjective, signifying *bad* (in the Masc. Gen. Plur. *mali*). *Subandi* עֲנָבִים, *grapes*.

⁴ The *Vitis Labrusca* of Linnæus. Discorides describes them, B. IV. cap. 183, and amongst other things observes, that the berries are small, and red when ripe. Rauwolf found in the neighbourhood of Tripoli (Travels, Vol. i. cap. 4. fol. 56.) wild vines, called *labruscæ*, on which nothing appeared but only the flower, *oenanthe*.

called *Sorek*. Hasselquist conjectures,⁵ that the prophet means the *Grey Nightshade*,⁶ which the Arabs call *Wolf-berries*,⁷ a plant which, in Palestine, and in neighbouring countries, frequently grows in vineyards, and resembles the vine, but is at the same time hurtful to it, and is therefore carefully weeded away. In the passage of Isaiah, however, it is much less far-fetched to suppose that the wild grape is alluded to.⁸

4. *Borith*,¹ *Prickly Saltwort*; Germ. *Salz- oder Seifenkraut*;² (Fr. *Saponaire*.)

The Hebrew word, which properly signifies *something purifying*,³ denotes both the ashes of the saltwort, which still are used in the East instead of soap,

⁵ *Travels*, p. 561. Germ. Transl.

⁶ *Solanum incanum*. Hasselquist minutely describes this plant amongst the Egyptian plants, p. 495.

⁷ *عنب الثعلب*. Cfr. Avicenna, p. 198.

⁸ Celsius's opinion (P. II. p. 199), that the Hebrew word **בְּאִשִּׁים** denotes that poisonous plant, which is called *Aconitum Napellus* (Engl. *Wolf's-bane*. Germ. *Eisenhuth*), which is founded on an untenable analogy with the Persian name of this plant (**بیمش**), Gesenius has confuted in his Comm. on Isa. v. 3.

¹ **בְּרִית**.

² *Salsola Kali*. Celsius, P. I. p. 449, sqq.

³ From the root **בָּרַר**, to *cleanse*.

for washing linen, and also the plant itself.⁴ This plant is by the Arabs called *Ushnan*,⁵ and belongs to the order of *Chenopodeæ* (the goose-foot tribe), which possess a considerable quantity of alkaline salts. There are, as Rauwolf observes, two species of this plant⁶ in Syria and in Palestine: the one, resembling our small saltwort, he says, is a bushy stout plant, with many slender branches, having on the top full glomes, and below these narrow pointed leaves, which are white below, and ash-coloured above. The other species, according to the same author, resembles the *Scouring rush* (*Equisetum hyemale*), having many glomes, and a thick ash-coloured woody root. Both species frequently grow wild⁷ in Egypt and Pales-

⁴ *Maimonides* on the Talmud Tract *Niddah*, cap. 9, § 6, says, בורית הוא צמח הוא מפורס באלגסול. *Borith* is a plant, which is interpreted in Arabic *el-Ghesul*, (الغسول), *i. e.* Washing herb.) On this Arabic word, by which *Hariri*, *Mekame* VII. p. 74, de Sacy's edition, has designated the *Kalisoap*, see de Sacy's *Chrestomathie Arabe*, T. iii. p. 209, 2d edit. Other passages from Rabbinical writings, see in *Celsius*, p. 450. *St. Jerome*, too, in his *Comm.* on *Jerem.* ii. 22, says, that *Borith* is an herb, which in Palestine grows in humid places, and which is made use of for washing.

⁵ اشنان القصريين, also اشنان, اشنان, *Ushnan* the *Fuller*, or *Washer*. *Golius Lexic. Arab.* p. 114.

⁶ *Travels*, Vol. i. cap. 2, p. 37. He calls the plant *Shinan*, instead of *Ishnan*. (See the next preceding note.)

⁷ *Sonnini*, Vol. i. p. 32, *Germ. Transl. Belon* in *Paulus' Collection*, Vol. iv. p. 151. *Arvieux's Accounts*, Vol. ii. p. 163, *Germ. Transl. Hasselquist*, p. 225. This author calls

tine; and the Arabs, particularly in the district of Belka, on the eastern bank of the river Jordan, prepare from it, not only artificial salt, but also *ashes for soap-making*, with which a considerable traffic is carried on.⁸ The *Borith* is alluded to as a purifying substance, Jerem. ii. 22, and Malach. iii. 2; and in the former place it is mentioned along with *nitre* (see above, p. 8). The same vegetable alkali is also mentioned under the name of *Bor*,⁹ Isa. i. 26, as a purifying substance in the smelting of metals; and in Job ix. 30, for washing the hands.¹⁰

the plant from which the kali is prepared, *Mesembryanthemum*, (Germ. *Zaserblume*.) Cfr. *Forskäl's Flora Ægypt.* Arab. P. LXIII. LXVII 54, 55. 98. Prosper Alpinus (*Hist. Nat. Ægypti*, T. II. p. 58) describes, under the name Kali, three plants. the ashes of which are used for soap. The Ara-

bic word ^قلبي denotes something *roasted*.

⁸ The manner in which salt and soap are prepared from this plant is described by Rauwolf, p. 38. Cfr. Burekhardt's *Travels in Syria*, p. 608. Germ. Transl.

⁹ בֹּר, בֹּרָ.

¹⁰ As to borith and other plants, from which vegetable alkali is obtained, see also Bochart's *Hieroz.* P. II. L. I. Cap. I. T. II. p. 680, Leipz. Edit. together with the Editor's notes. Joh. Mich. Lange's two Dissertations *de Herba Borith*, Altdorf, 1705. Christ. Bened. Michaelis *Epistola ad Gr. Hoffmannum de Herba Borith*, Halle, 1728. *Beckmann's History of Inventions*, Vol. IV. p. 10, sqq.; and A. Th. Hartmann's *Hebrew Woman at her Toilet*, Vol. I. p. 163, sqq.

5. *Malluach*,¹ *Orach* ; Germ. *Melde* ;² (Fr. *Arroche*.)

Job complains in chap. xxx. 4, that he is exposed to the scorn of the lowest and most contemptible people, who, from indigence, were obliged to seek among wild herbs their miserable sustenance. He mentions as one of these the *Malluach*, growing on the shrub,³ *i. e.* near hedges. The most ancient Greek translator interprets this Hebrew word, which occurs only once in the Old Test., by *Halimos*,⁴ *i. e.* *Orage*, which agrees very well with the context of the above passage. Dioscorides⁵ says, it is a shrub resembling the *Rhamnus*, but without thorns, with leaves like those of the olive tree, only broader ; it grows near hedges, and on the sea coast. The leaves are boiled as vegetables, and the young shoots are used for salad ; they are also pickled and preserved for future use.⁶

¹ מַלּוּאֵחַ.

² *Halimus Atriplex*. Bochart's Hieroz. Part I. L. III. Cap. 16. T. II. p. 223, sqq. Leipz. Edit.

³ מַלּוּאֵחַ עֲלֵי - שֵׁיחַ.

⁴ ἄλιμος. This Greek name, like the Hebrew, denotes salt (*salsus*), in allusion to the taste of the plant. Its Arabic and Syriac name corresponds with the Hebrew, see *Aben-Beitar* in Bochart, l. c.

⁵ B. I. cap. 121.

⁶ Concerning J. D. Michaelis's and Cedmann's opinions about *Malluach*, see Dr. Rosenmüller's Comm. on Job xxx. 4. With the above plant must not be confounded the *Melochie*

ملوخية, in Greek *Μελόχνη* (Dioscorides, B. II. cap. 144)

6. *Laanah*,¹ *Wormwood*; Germ. *Wermuth*;² Fr. *Absynthe*.

The wormwood is also in our part of the world a frequent species of the genus *Artemisia*: it has hoary and woolly leaves, and roundish, peduncled, and nodding flowers. The stem attains the height of two feet, and is hard, angular, panicled, and erect. It is well known that this plant contains much of a bitter element, and because the Hebrews considered bitter plants as pernicious, and even poisonous,³ the authors of the Bible often typically express by wormwood that which is disagreeable, hurtful, and delete-

i. e. garden mallow, (*Corchorus olitorius*, Forskäl, Flora Ægypt. Arab. p. CXIV. and 141), which is reared in the gardens of Egypt, and boiled with meat. See *Abdollarif's* Memorabilia of Egypt, B. I. cap. 2. p. 14, White's Edit., and de Sacy's notes to the French translation, p. 40. See also Sonnini's Travels, Vol. I. p. 264, Germ. Transl.

¹ לְעֵנָה.

² *Absinthium*, Celsius, P. I. p. 481. The Chaldee, as well as the other Oriental translators and the Rabbins, unanimously interpret the Hebrew word by wormwood; and this signification does also completely agree with the context in every passage. But the Greek translators of Alexandria never put the name of the plant ἀψίνθιον, but the thing figuratively expressed by it, such as πικρίαν, Deut. xxxiv. 18, ἀνάγκας, Jerem. ix. 14, ὀδύνην, Jerem. xxiii. 15.

³ For this reason, it is said in Revel. viii. 10, 11, that by the star, wormwood, which fell into streams and wells, the waters were made bitter, and that many people died from drinking of them.

rious.⁴ Thus, in Deut. xxix. 18,(λ) he, among the Israelites who should devote himself to the service of foreign gods, and seduce others to the same, is called a *root bearing wormwood*. The enticements of a loose woman are, in Prov. v. 3, 4, compared with honey, which in the beginning is sweet, but at last has the taste of wormwood. Of unrighteous judges it is said, Amos v. 7; vi. 12, that they turn justice into *wormwood*.(μ) With the prophet Jeremiah ix. 15; xxiii. 15. Lament. iii. 15, 19, wormwood is a figurative expression, denoting great calamities.⁵

⁴ The root of the Hebrew לַעֲנָה, as appears from the Arabic لعن, signifies to *curse*, and accordingly the name denotes something *accursed*.

(λ) Hebr. Bible, v. 17.—*Tr.*

(μ) The prophet, indeed, uses the same Hebrew word, *Laanah*, in both places; in the former the English Bible has *wormwood*, but in the latter *hemlock*. According to Buxtorf and other lexicographers, *Laanah* has no other signification than *wormwood*. The Septuagint has πικρία, *Bitterness*, in Amos vi. 13, (for verse 12 of the text is v. 13 in that version), but in v. 7, the Greek translator seems to have had a quite different text before him. The English translator has, in v. 12, probably been led astray by some old version.—*Tr.*

⁵ Celsius (l. c. p. 48^b) and J. E. Faber (in his MS. papers on Biblical Botany) believe that the Hebrew לַעֲנָה, does not denote our wormwood, but a plant resembling it, viz. the *Absinthium santonicum* (Germ. Wurmkraut), called by the Arabs *Shiha* (شيه), which, as Rauwolf observes (*Travels*, 456), in Palestine grows wild in many places, and is by

7. *Rosh*,¹ *Rye-grass, Madwort*; Germ. *Lolch, Tollkraut*; (Fr. *Coquiolo, Cigue?*)

The Hebrew word, properly denoting *poison* in general,² occurs in five places, (Deut. xxix. 17. Jerem. ix. 14; xxiii. 15. Lament. iii. 19. Amos vi. 12), in juxtaposition with the wormwood (*Laanah*), as an equally bitter and deleterious plant. From Hos. x. 4, it may be inferred, that this plant grows in corn-fields;³ and from Deut. xxxii. 32, that it produces grapes or berries;⁴ but from Ps. lxix. 22. Jerem. viii. 14; ix. 14; (v) xxiii. 15, it appears to be

him thus described: "Its leaves are small and ash-coloured, pretty much resembling the leaves of our wormwood, and it has many slender little stems full of small yellowish seeds; its scent is unpleasant, the plant is very bitter, with a saltish sharpness: our *worm seeds* (vermifuge seeds) are gathered from it." Hasselquist (p. 511) designates a similar Egyptian plant by the words: *Dubia planta Shihe*. The same author, however, remarks (p. 184), that wormwood, too, is a frequent plant in Palestine.

¹ ראש, and also רוש, in several MSS. in almost all the passages in which the word occurs: see J. D. Michaelis's Supplem. ad Lexica Hebræ. p. 2223.

² ראש פתנים, in Deut. xxxii. 33, (Job lx. 16.) (ξ) denotes *the poison of asps*.

³ There it is said, that "*injustice springeth up*" among the Israelites, "*like Rosh in the furrows of the field.*"

⁴ ענבי רוש.

(v) Chap. ix. v. 14, is a right quotation by the Hebrew Bible: in the Engl. it is v. 15.—Tr.

(ξ) That this last quotation is wrong is obvious; it is probable that Job xx. 16, is the passage meant.—Tr.

a plant of an extremely unpleasant taste, since in these passages *Rosh-water*⁵ is a typical expression for great sufferings. It is very questionable, whether all these characteristics are to be found united in a single plant. It seems that the name *Rosh* has been given to several pernicious plants, which we, however, cannot determine with certainty. The ancient translators disagree so very much, and are so inconsistent, that it is apparent they only were guessing.⁶ It seems that *rye-grass*,⁷ *corncockle*, or *madwort*, the only poisonous kind of grass which grows amongst the corn, and of which the seed is narcotic,⁸ best agrees with the passage, Hos. x. 4. But in Deut. xxxii. 32, it would appear that there is meant a plant of the order *Solanææ*, to which belong several strongly narcotic poisonous plants, producing berries, such as the *Belladonna*, or Deadly Nightshade,

⁵ מִי-רֹאשׁ.

⁶ Their interpretations, see in Celsius (P. II. p. 47), cfr. Michaelis, l. c. p. 2223.

⁷ *Lolium temulentum*.

⁸ The Greek Alexandrian translator, in Hos. x. 4, puts ἀγρώστis for מִי-רֹאשׁ. St. Jerome thus describes this plant in his comm. on the passage: Est genus herbae calamo simile, quae per singula genicula, fruticem sursum et radicem mittit deorsum, rursusque ipsi frutices et virgulta alterius herbae seminaria sunt, atque ita in brevi tempore, si non imis radicibus effodiatur, totos agros veprium similis facit. Cfr. Dioscorides, B. IV. cap. 30. From the description of both authors it appears that ἀγρώστis is the *couch-grass*, which puts forth straws in the earth, spreading themselves by means of branches. This weed increases very rapidly, and is very troublesome.

(Germ. Tollkirsche, Teufelsbeeren), the *Black Henbane*, or *Hyoscyamus* (Germ. *Schwarzes Bilsenkraut*), several species of the Nightshade, &c. If the *henbane*, which grows in Arabia and Egypt, is pulverized, and the powder stirred about in water, it has the power of effecting something like madness for several days,⁹ and this would in some measure agree with the above quoted passages of Jeremiah, in which *Rosh-water* is mentioned.¹⁰

In Matth. xiii. 24, 25, we read as follows, according to Luther's version: "*The kingdom of heaven is like unto a man who sowed good seed in his field, But while the people slept, his enemy came and sowed weeds amongst the wheat.*" The Greek word¹¹ which Luther translated by *weed*, denotes, however, a particular species of weed, viz. the *rye-grass*, or *corn-*

⁹ *Forskäl* (in the *Flora Ægypt. Arab.* p. 45) describes the Arabic hyoscyamus, which also grows in desert places round about Kahira, and he adds: *Si pulvis plantae hujus a maligna manu propinatur alicui, eum quasi insanum reddit; et nonnisi elapsis aliquot diebus rationis usum recuperat.*

¹⁰ J. D. Michaelis, in his *Supplemen.* p. 2220, has satisfactorily shewn, that שׂוֹן cannot be the *hemlock* (*Cicuta*), as Celsius (P. II. p. 47, sqq.) and several others have believed. And we can as little agree with Oedmann, who (*Sammlungen aus der Naturkunde* IV. cap. 10,) took the *Coloquinteda*, a wild, bitter cucumber, for שׂוֹן. For of that plant it cannot be said, as we read in Deut. xxxii. 32, that it produces *grapes* or *berries*. Moreover, the Hebrew name for the *Coloquinteda* is פִּקְעוֹן, as will appear hereafter.

¹¹ Ζιζάνια.

cockle, by the later Hebrews called *Zonin*,¹² and by the Arabs *Zawán*.¹³ It is said, that in the beginning, when it first appears above the ground, it scarcely can be distinguished from the good wheat, but that as it grows up it ever more and more changes its form and quality. That this weed is also frequent in Palestine and in Syria appears from this observation of *Volney*:¹⁴ that the peasants of these countries, lest they should lose a single grain of the corn, do not cleanse away the seeds of the weed from it, and even leave the *rye-grass*, in Arabic called *Siwan*, amongst it, which stuns people, and makes them giddy for some hours, as he found to be the case by his own experience.

8. *Rothem*,¹ *Spanish Broom*; Germ. *Ginster*;²
(Fr. *Spargelle*.)

The Arabic word *Ratam*,³ corresponding with the Hebrew *Rothem*, denotes that plant which the Ger-

¹² זֶזֶן. See Buxtorf's *Lexic. Chald. Talmud.* p. 680.

¹³ زوان. On this word, see the extracts from the *Kamus* and *Ibn Sina* by Aurivillius, in *J. D. Michaelis's Literary Correspondence*, Vol. I. p. 43.

¹⁴ *Travels*, Vol. II. p. 306, Germ. Transl.

¹ רתם.

² *Genista*, *Celsius*, P. I. p. 246. *Linnæus's Spartium junceum*, *Forskäl's Genista Rahtem*, *Flora Ægypt. Arab.* p. 214.

³ رتمة, رتم.

mans call *Geniste* or *Ginster* (Engl. broom), a shrub which puts forth a multitude of long thin stems like rods, from whence it also has its other German name *Pfriemenkraut*.^(o) This shrub attains the height of four or five ells. The twigs, which are so pliant, and so strong, that they are made use of for the support of the vine, which is bound up to them,⁴ have only a few leaves, which soon fall off. The flowers are dirty white, of a sweet taste, and from them are formed brown pods, containing seeds like lentils, only smaller, which in taste resemble ordinary peas.⁵

The broom is three times mentioned in the Old Test. First, in 1 Kings xix. 4, 5, where it is related, that the prophet *Elias*,^(π) in order to escape from the persecutions of Jezebel, fled into the desert of Beersheba, sat down under a broom shrub, and fell asleep. Although the broom affords but a slight shade, it still is welcome to the exhausted wan-

(o) From *Pfrieme* an *awl*, piercer, and *Kraut* a plant. — *Tr.*

⁴ Hence the plant has its Hebrew and Arabic names, for the root signifies *to tie up to* (*alligare*).

⁵ Dioscorides, B. IV. cap. 158.

(π) This undoubtedly is the most eligible way of spelling this prophet's name in English, not only because this spelling is adopted by every European version, except the English, but for this still stronger reason, that it is grammatically justifiable to substitute a terminative *s* in the Gotho-Teutonic languages for the Hebrew *h*; for, in terminations, this element clearly is a kind of Sanscrit *Visarga*. (See Colebrook's and Bopp's Sanscrit Grammars on the *Visarga*.) *Elijah* is a mode of spelling, which, pronounced in the English manner, renders the recognition of the name quite impossible.—*Tr.*

derer in the wilderness.⁶ With *Virgil*⁷ the herdsmen, and with *Calpurnius*⁸ the cows, take their rest under the shade of a broom.

The acute pain caused by slanderous tongues, is, in Ps. cxx. 4, compared with the *embers of broom coals*. The broom is a usual fuel in the deserts of the East,⁹ and probably the coals of it continue a long time to glimmer, as, according to the observation of Talmudic writers, the coals of the juniper, which they believe to be *Rothem*.¹⁰ The coals of another tree, called *Gadha*, which grows in Arabia, have the same property; and hence the proverbial phrase amongst the Arabians: “*He has laid Gadha*

⁶ In Paulus's Collection of Travels, Vol. I. p. 213.

⁷ Georgics, II. 434.

———Salices, humilesque genistae,
Aut illae pecori frondem aut pastoribus umbras
Sufficiunt.

⁸ Eclog. I. 5.

⁹ The caravan, with which Thevenot travelled from Suez to Tor, pitched its tents in a place where some broom shrubs were growing, on purpose to make use of them for fuel. Voyages, P. I. Liv. II. chap. 25.

¹⁰ And St. Jerome is of the same opinion in his letter to Fabiola, the 78th in Vallarsi's Edition, Vol. I. p. 482. Forskäl, indeed, thinks (l. c.), that the figurative expression of the psalm has reference to the rattling noise with which broom blazes up when kindled; and that this is an appropriate type of an angry and unkind temper. But in the passage of the psalm such a temper is not alluded to, but slanderous abuse giving pain to him who is subject to it: neither does the passage speak of a flame, but of coals.

coals in my heart, i. e. he causes me corroding grief.¹¹

Job complains, xxx. 4, that he is exposed to the scorn of the lowest and the most contemptible class of men, whom he characterizes as being, by indigence, compelled to gather their sustenance from the orach near the hedges, and from *broom roots*. But of the latter the taste is so bitter, that only those who are expelled from human society, and wander about in deserts, can have recourse to such a nourishment, in order to preserve themselves from starving.¹²

¹¹ Hariri's Concess. V. p. 174. A. Schulten's Edit.

¹² *Forskäl*, l. c. does rightly observe: Vitae pauperrimae symbolum est Job xxx. 4, et hominis in deserto palantis, cui nullum superest alimentum, nisi hujus radicis, quam Arabum nemo gustare cupit propter amaritiam. Oedmann (Samml. aus der Naturk. Pt. I. cap. 8. p. 169, sqq.) thinks that Job's words, **נִשְׂרֵשׁ רִתְמִים לְחֶמֶם**, should be translated:

“*They make use of broom roots to warm themselves.*” For Felix Fabri, in the account of his journey through the desert between Gaza and Mount Sinai, relates that the caravan with which he travelled, found no other fuel than some withered bushes, which they tore up by the roots and burnt. But it cannot be considered as a description of extreme poverty and misery, that travellers in the desert, where other fuel is lacking, tear up shrubs by the roots to make fire, by which they cook their victuals and warm themselves. The above interpretation, therefore, undoubtedly is the correct one.

9. *Kikayon*,¹ *Castor-oil Plant*; Germ. *Wunderbaum*; ²
(Fr. *Palma Christi*, *Ricin*, *Catapuie*.)

The bower in which the prophet Jonah sat down before the city of Niniveh, while awaiting its fate, was, as is related in the book which bears his name, chap. iv. 5, overshadowed by a plant, called *Kikayon*, which had grown up in one night. St. Jerome, in his Commentary on the book of Jonah, says that, in the Syriac and the Punic language, this plant is called el-Keroa;³ and that it is a shrub which is to be found in many sandy places of Palestine, growing with such rapidity, that in a few days it attains a considerable height. "Its leaves," he adds, "are broad, resembling vine leaves; its stem straight, requiring no support, and its broad leaves afford an agreeable shadow." This description, as well as the name given to the plant by St. Jerome, makes us without any difficulty recognize the *Ricinus* (by the Germans called *Wunderbaum*), which often is cultivated in our gardens. This shrub has a thick hollow stem, full of knots and joints, and out of each of these spring forth the broad, peltate, palmate, and serrate leaves, which are six or seven lobated, or di-

¹ קִיָּוֹן.

² *Ricinus*. *Celsius*, P. II. p. 273, sqq. Bochart's *Hieroz.* P. II. L. II. Cap. 24. T. III. p. 41 and 523. Leipz. Edit. J. D. Michaelis Supplemm. p. 2185. Forskål's *Flora Ægypt. Arab.* p. 164.

³ In Arabic الخروع.

vided into a still greater number of lobes. Between these and the stem the yellow mossy flowers appear, from which are formed triangular pods, with red fibres, each of which contains three variegated oblong seeds, with a white oily kernel. Niebuhr⁴ saw at Basra an *el-Keroa* shrub, which had the form and appearance of a tree. "The stem," he observes, "appeared to me to consist more of leaves than wood, yet it is harder than the plant which produces what is called the Adam's-fig. Every branch has only one big leaf, of six, seven, or eight angles. The plant stood near a water channel, where it was well watered. In five months (about the latter end of October), it had grown to the height of eight feet, or thereabout; and it both had flowers, and also green and ripe fruit. Another tree of the same species, which had not had so much water, was in twelve months not grown to a greater height. Some leaves and flowers, which I broke off, faded away in a few minutes, as all herbs of a very rapid growth commonly do." Thus, the Palma Christi, (g) under whose shade Jonah sat, being at day-break struck by an insect, faded away so suddenly, that at sunrise the shrub was quite withered, chap. iv. 7, 8. *Rauwolf* found, near Tripoli in Syria, the *Ricinus*, which, as he observes, the Arabs call *el-Kerua*, in such an abundance, that it nearly blocked up the road, and rendered it very difficult to proceed.⁵

⁴ Description of Arabia, p. 148.

(g) The margin of the English Bible had the word *Palm-crist*, which seems to be a mere imitation of *Palma Christi*.—*Tr.*

⁵ Travels. p. 52. The most ancient Greek Alexandrian

10. *Packuoth*,¹ *Wild Cucumbers*;² Germ. *Wilde Gurken*; Fr. *Concombres Sauvages*.

In the second book of Kings, chap. iv. 39, 40, it is related that the prophet Elisha at Galgala, where

translator interprets the Hebrew word *Kikayon* by *κολόκυνθα*, a kind of wild *gourd*; and accordingly, several other translators, and Luther too, have put *gourd*. Germ. *Kürbis*. And Niebuhr observes (l. c.) that the Christians and Jews at Mosul and Hhaleb maintained, that el-Keroa is not the plant which afforded a shade to Jonah, but a kind of *gourd*, *Elkerra*,

(القرعة) which produces not only very large leaves, but also a very large fruit, and lives not longer than about four months. J. E. Faber, in his Notes on “*Harmer’s Beobachtungen über den Orient. i. e. Observations concerning the Oriental countries*, Vol. i. p. 145, has also defended this opinion. But the opinion of the Palestinian Jews mentioned by St. Jerome, that *Kikayon* denotes the *Palma Christi*, is not only supported by the circumstance, that what is said in the book of Jonah of the rapid growth, and the rapid decay of the *Kikayon*, completely agrees with the *Ricinus* or *Palma Christi*; but also by this, that the Hebrew name evidently is derived from the Egyptian name of this plant, which is *Kiki*, (see Herodot. Book II. chap. 94, and Jablonsky’s Opusc. P. I. p. 110), to which the Hebrew termination has been added; and also that the *Kik-Oil*, *שמן קיק*, mentioned by the Talmudists, is prepared from the seeds of the *Ricinus*, see Buxt. Lexic. Chald. Talmud. p. 2029. *Dioscorides*, too, (Book IV. chap. 164) describes the *Palma Christi* (*κρότων*), under the name of *κίκι*, and calls the oil made from its seeds *κίκιον έλαιον*.

¹ פִּקְעוֹת.

² Cucumeres Agrestes. Celsius, P. I. p. 393, sqq.

many disciples of the prophets gathered around him, ordered one of them to prepare for them a dish of vegetables. One of them went into the field, found wild tendrils,³ took their fruit, which was unknown to him, and sliced them into the pot. When the disciples of the prophets saw the boiled fruits, they cried: "Man of God! There is death in the pot!" and they would not eat the pottage. Elisha asked for some flour, cast it into the pot, and this rendered the dish eatable. The fruits which were boiled, are in Hebrew called *Packuoth*. Because they grew on wild tendrils, several interpreters believed them to be *Coloquintedas*,⁴ which belong to the cucumber tribe of plants, by their tendrils creeping along the ground, and produce round yellow fruits, which become as large as oranges, and even larger. They are extremely bitter, laxative, griping, and hurtful to the nerves. This plant is indigenous in Palestine, in Syria, in Arabia, and several other Eastern countries. It is probable, however, that the Hebrew name denotes another plant, viz. the *wild Cucumber*, by the Arabs and the Persians, called *Ass Cucumber*,⁵ which also belongs to the cucumber tribe, bears an oval fruit of a very bitter taste, and grows in desert and sandy places. When the ripe cucumber is

³ Thus, Luther has rightly translated the Hebrew expression, **גִּפְזֵי שִׁדְדָה**. For **גִּפְזֵי** does not here, as elsewhere, denote the vine, but a kind of wild tendrils.

⁴ Thus, the most ancient Greek translator: *πολύπη ἀγρία*, i. e. according to Suidas's interpretation, *ἀγρία κολοκύνθη*.

⁵ خسر خيار، قشا الحمار.

a little pressed by the finger, it bursts with an explosion, spritting out the seeds and the juice ; from which it has its Hebrew name ; for the root⁶ signifies *to crush*. As this cucumber has very much the same appearance as that which is cultivated in gardens, but only is somewhat smaller, and as even its leaves and tendrils are similar,⁷ it might easily happen, that the man sent out by the disciples of the prophets took wild cucumbers for a harmless fruit, and prepared a meal of them. But the bitter taste of the boiled cucumbers made those who tasted them fear that they were poisonous. See above, No. 6, p. 116.

11. *Dudaim*,¹ *Mandrake* ; Germ. *Alraun* ;² Fr. *Mandragore, Circée*.

In Genesis, chap. xxx. 14, sqq. we read as follows :
 “ *Reuben went out in the days of wheat-harvest, and found Dudaim in the field, and brought them home to his mother Leah. Then Rachel said to Leah, give me of thy son’s Dudaim. She answered: Hast thou not enough, having taken my husband? and wilt thou also take my son’s Dudaim? Rachel said: Well, let him lie with thee this night for thy son’s Dudaim. And as Jacob in the evening came from the field, Leah*

⁶ פִּקֵּעַ.

⁷ Dioscorides, B. IV. cap. 154.

דֹּדַיִם.

² *Atropa Mandragora* ; J. D. Michaelis Supplemm. ad Lexicc. Hebr. p. 412, sq. Celsius, P. I. p. 3. Oedmann’s Vermischte Sammlungen aus der Naturk. P. I. c. V. p. 94, sq.

went out to meet him, and said : Thou shalt lie with me, for I have bought thee with my son's Dudaïm. And he lay with her that night, and God heard Leah's prayer, and she became pregnant," &c. Besides this passage, the *Dudaïm* are once more mentioned, as a sweet-scented plant, in the Song of Solomon, vii. 13. The most ancient Greek translator interprets the Hebrew name, in Gen. xxx. 14, by *Mandrake-apples* ;³ and in the Song of Solomon, by *Mandrakes*.⁴ This

³ Μῆλα μανδραγοράων.

⁴ Οἱ μανδραγόραι. Saadias, Onkelos, and the Syriac version agree with the Greek translators. The first of these puts

لَفَّاح, *Loffach*, the two latter יַבְרוּחִין, *Yabruchin* ; which names denote the same plant. Mariti says (Travels, p. 564), that the Arabs called the Mandrake plant *Yabrochak*, and this word evidently is the same as *Yabruach*, which is used by the Chaldee and Syriac translators. The ancient translators accordingly entertained no doubt as to the plant denoted by the Hebrew word, and we deem it safest to follow them. Oedmann has (l. c.) started well-founded objections against Celsius's opinion : that the Hebrew word denotes a species of lotus ; and also against Ludolf's conjecture : that the *Dudaïm* were the fruit of the *Musa paradisiaca* ; cfr. Joh. Simonis' 'Treatise on the *Dudaïm*, in his *Arcan. Formar. Hebraic.* J. E. Faber (see *Das Alte und Neue Morgenl. T. I. p. 144*) believed, that the *Dudaïm* were a small fragrant melon, which grows in Syria, in Egypt, and in Persia, called by Vesling *Cucumis Ægyptius reticulatus*, and by the Persians *Destembuyeh* (دستنبویه), i. e. *Fragrance in the hand*. But this, too, is a mere conjecture which falls to the ground, being opposed to the unanimous testimony of the ancients. I shall not here notice other quite improbable conjectures, ex. gr. *Steiger's* (in the *Bibl. Exeget. Repertory*, Vol. ii. p. 45) :

is a plant which frequently grows wild in Palestine, and in the neighbouring countries. It is low, like lettuce, and also has similar, but dark-green, smooth-edged leaves, which are pointed at the ends, have no peduncles, but spring out immediately from the root. From the blossoms, which are blue or reddish, are formed small yellow fragrant apples, which the Arabs eat with great relish. The root, which is thick, and resembling a rape, greyish-brown on the outside, but internally red, is often forked in its lower part, which gives it an appearance resembling a human body, without arms, and with crossed legs.

Reuben found, according to the above quoted passage of Genesis, the *Dudaim* in the days of wheat-harvest; which, in Palestine, and doubtless also in Mesopotamia, where Jacob at that time resided, takes place in the month of May; and in the beginning of this month, Hasselquist* saw in the neighbourhood of Nazareth, a great abundance of mandrake fruits already ripe on their stalk, which lay withered on the ground. On the fifteenth of May, *Stephen Schulz*⁵ also found mandrakes on Mount Tabor, which, as he says, “ have a delightful scent, and whose taste is equally agreeable, although not to every body. They are almost globular, and yellow like oranges, about two and a-quarter inches in diameter. This fruit

that the *Dudaim* denote *Flower baskets*, or *Flower pots*. Cfr. Donat's *Auszug. aus Scheuchzer's Physica Sacra*, i. e. Abstract of Scheuchzer's *Phys. Sacra*, Vol. i. p. 301, sqq.

* Travels, p. 133.

⁵ *Leitungen des Höchten*, i. e. Guidances of the Most High, Vol. V. p. 197.

grows on a shrub resembling the mallow; and the fruit lies about the stem, as it were about the root, after such a manner, that a single shrub may have six to ten fruits, of which the colour is so beautiful, that no orange equals its brilliancy. This fruit is, on account of its power to excite voluptuousness, by the Arabs called *Tuphach elsheitan*,⁶ i. e. The Devil's apple." Mariti found, on the seventh of May, a mile from the hamlet of St. John, in Mount Juda, mandrake plants, which the Arabs call *Yabruach*. "The greatest number of them," he observes, "already had ripe fruits, which are apple-formed and sweet-scented. An Arab, intending to be particularly civil, dismounted, and fetched some of these fruits, which he offered us to eat; but we Europeans felt no inclination to avail ourselves of his kindness, being of opinion that they might possess a soporiferous power, and be hurtful to health. The Arab, however, ate six or seven of them, quite delighted with their taste. Our dragomans afterwards told us, that the Arabs greatly relished this fruit, because, after eating it, they felt themselves animated with a certain cheerfulness and vivacity, and they believed it aided the procreation of offspring." A Samaritan priest at Naplusa, whom *Maundrell*⁷ questioned concerning the *Dudaim*, informed him that they were a plant with large leaves, bearing a fruit whose form resembled that of an apple, which was unwholesome, yet possessing the power of promoting conception

⁶ تفاح الشيطان.

⁷ In Paulus' Collection of Travels, Vol. I. p. 80.

when laid below the nuptial-bed. The married women of modern times still made this use of it, in the hope thus to obtain offspring. This also, no doubt, was the reason why Rachel, who had not as yet been in childbed, was so desirous of obtaining from her sister the fruit, through which she hoped to become a mother, and, by the short delay of one night, secure to herself an happiness, which she had long wished for in vain. The Eastern nations relate many more fables concerning the properties and powers of the mandrake plant, which perhaps have been occasioned by the above-mentioned peculiar form of its root.⁸

12. *Copher*,¹ *Cypress Shrub*; Germ. *Cyper Strauch*;²
(Fr. *Cyprès*.)

In the Song of Solomon, the Copher is twice (i. 14; iv. 13) mentioned, as a plant much esteemed for the fragrance of its flowers. The most ancient Greek translators, and the Rabbins, unanimously declare, that by this Hebrew name is denoted that plant

⁸ Herbelot's *Bibl. Orient.* under *Abru-Sanam* and *Asterenk*.

¹ זָפֶר.

² Cyprus. Celsius, P. I. p. 222. Linnæus's *Lawsonia Inermis*. Hasselquist, p. 502. Forskäl *Flora Æg. Arab.* P. LV. Oedmann's *Sammlungen*, Pt. I. cap. 7. J. D. Michaelis in his *Supplem.* p. 1335, thinks that זָפֶר, which he

compares with *كافور*, denotes *Palm flowers*, or *Date grapes*. But his objections to the common acceptance of the Hebrew word are not of any importance, and they are satisfactorily confuted by Oedmann, l. c.

which the Greeks call *Kypros*,³ and the Arabs *Al-henna*.⁴ This plant, which grows in many places both in Palestine and in Egypt, is a tall shrub, sometimes six feet in height. The bark of the stem and the branches is dark-grey, and the wood internally of a yellowish hue. The leaves grow on the branches upwards, opposite to each other, and they do not fall off in winter. They resemble myrtle leaves, but are smaller and thinner, and also less dark-green. The flowers open on the ends of the branches; before they open, they have the appearance of small green and red globules, smaller than the head of a pin. They open almost all at once, and then make a very pleasant nosegay, which *Mariti*⁵ thinks cannot better be compared to any thing than to a large cluster of grapes turned upwards, on which the berries are not so numerous and closely clustered, and where they are a little removed from their common peduncle. For this reason, the cypress-blossom is, in the Song of Solomon, i. 14, called a cluster. The corolla consists of four leaves, which are, as it were, rolled together, or curled, and have a yellowish hue. Between each leaf there are two white filaments, with yellow tops; only one white stigma is to be seen. The style is originally of a rusty colour, and subsequently takes a light-green hue. The cup is divided into four parts,

³ *Κύπρος*. This word is not essentially different from the Hebrew; it only has the Greek pronunciation and termination. Dioscorides furnishes a description of this plant, B. I. cap. 125.

⁴ *الحنا*.

⁵ Travels, p. 540.

which are of a soft green colour to the edge, but the edge itself is of a rusty colour. The fruit or the berry, before it is ripe, is a green pod; but when it ripens, it takes a red colour, and when it is dry, it becomes brown. They are divided into four receptacles, in which the triangular brown seeds are enclosed.⁶ The cypress plant is held in particularly high esteem by the Greeks, the Arabs, and the Turks; and they think that they make an agreeable present when they offer to a person a posy of its flowers. In reality, this plant is, as Sonnini observes, one of those which are particularly agreeable, both to the eye and the olfactory organs. “The somewhat dark colour of its bark, the light-green hue of its leaves; the soft mingling of white and yellow with which the flowers, hanging together in long clusters, are coloured; the red dye of the branches which bear them—make a whole of which the effect is very pleasing. These flowers, of which the colouring is so soft, spread the most delightful fragrance to a great distance, and fill with balsamic odour the gardens and rooms which they adorn. Of them is also commonly made the posy with which beauty decks herself. The women are fond of decorating themselves, as well as their parlours, with them; they take them into the baths, hold them in their hand, and perfume their bosoms

⁶ Sonnini's Travels, Vol. I. p. 169, Germ. Transl. Olivier's *Voyages*, T. III. p. 300. Cfr. Prosper Alpinus *De Plantis Ægypti*, cap. 13. The engraving of the Albenna plant, which accompanies that work, is, according to Mariti's judgment, not bad, and it very much resembles the shrub, except that the leaves have been drawn too small in proportion, and more slender than they are in reality.

with them. This enjoyment, which the mild climate, as the plant is easily cultivated, so abundantly affords them, they hold in such a high esteem, that they wish to appropriate it to themselves exclusively, and they are displeased to see Christian or Jewish women share it with them." These observations render the bride's speech, in the Song of Sol. i. 14, very intelligible: "*My beloved is to me a cypress grape in my vineyard (or garden⁷) at Engedi.*"⁸ Probably the warm climate of this district was particularly favourable to the cultivation of the alhenna shrub. For although this plant is indigenous in Syria, in Palestine, and in Egypt, it still requires a particular care and attention from those who wish to have it in good condition. As long as it is a tender plant, it is kept in pots; but when it becomes stronger, it is planted in the open ground. In summer it loves the shade, and in winter the sun, and in both seasons it must be diligently watered. Moreover, in winter, the stem is protected by sheep-dung and horse-dung mixed together.

The leaves of the cypress or alhenna plant being, either green or dry, sodden down and then pulverized, make a beautiful orange dye, with which the

⁷ For the Hebrew word **בָּרֵם** does not only denote a *vineyard*, but, in general, a carefully cultivated piece of land, which is planted with valuable plants of any kind. Thus, in Judg. xv. 5, **בָּרֵם זֵית** signifies an *Olive garden*.

⁸ As to *Engedi*, see Rosenm. Bibl. Geogr. Vol. II. Pt. II. p. 162.(ε)

(θ) Part of this work has already been published in the *Biblical Cabinet*, and it is intended that the remainder shall appear with as little delay as possible.

women of the East dye their nails, the palms of their hands, and their hair.⁹

13. *Carcom*,¹ *Saffron*; Germ. *Safran*; (Fr. *Safran*, *Saflor*, *Cartome*, CONCOURME.)

In the Song of Solomon, *Carcom* is also mentioned, iv. 14, along with several other fragrant plants. It is undoubted, that by this name the Saffron plant is designated, since the similar Arabic name³ denotes the *Indian Saffron*.⁴ The Greek word Κρόκος, by which the most ancient Greek translator interprets the Hebrew word, denotes this same plant.⁵ The *genuine Saffron*, as it is called, is an herb which grows wild in every Eastern country, and also in Greece, but is cultivated in many places in Southern Europe, having erect linear leaves, with revolute margins, a two-leaved spatha, and a bulbous root. The purple-coloured fragrant flower has small aromatic deeply coloured fibres, which are the ends of

⁹ *Mariti*, p. 541. *Sonnini*, I. 171, 175. *Höst's* Accounts of Fez and Marroko, p. 307. Cfr. *Hartmann's* Hebrew Woman at her Toilet, Vol. II. p. 356, sqq.

¹ כַּרְכֹּמִים,

² *Crocus Sativus*. *Celsius*, P. p. 11.

³ كركم. See *Ibn Sina*, p. 16 of the Arabic text.

⁴ *Saffron* is the Arabic, صفران, *Yellow*; this plant is also (by the Germans) called *Gilbwurz*, i. e. *Yellow-root*.

⁵ *Dioscorides* describes the different species of *Crocus*, B. I. cap. 25.

the triply divided pistil. *Virgil*, in his instructions concerning the cultivation of bees, advises the husbandman to spread the fragrance of crocus flowers through the gardens which are to invite the bee-swarms.⁶ The ancients frequently made use of this flower in perfumes. Not only saloons, theatres, and places which were to be filled with a pleasant fragrance were strewed with saffron, but all sorts of vinous tinctures retaining the scent were made of it, and this costly perfume was poured into small fountains, spreading the odour which was so highly esteemed. Even fruit and comfitures placed before guests were spread over with it, and other things with which the rooms were ornamented. It was used for the same purposes as the modern pot-pourri.⁷

14. *Shushan*, and also *Shushannah*,¹ *The Lily* ;
Germ. *Lilie* ;² Fr. *Lis*, *Fleur de lis*.

It is unquestionable, that the above Hebrew words denote the *Lily*. This appears from the similarly sounding Arabic name,³ which also was known to

⁶ *Georgics* IV. Vs. 109. *Invitent croceis halantes floribus horti.*

⁷ Proofs of this, see in Beckmann's *History of Inventions*, B. II. p. 81, sq.

¹ שושנה, שושן.

² *Lilium*. Celsius, P. I. p. 383.

سوسنة, سوسن; cfr. Ibn Sina, p. 220 of the Arabic

the Greeks.⁴ The lily is indigenous in the countries of the East, and grows wild in the fields. Therefore, Jesus says, Matth. vi. 28, sqq.: "*Behold the lilies in the fields, how they grow; they work not, neither do they spin; I say unto you, that even Solomon in all his glory was not arrayed like one of these. Now, if God does thus clothe the grass of the field, which remains standing to-day, but is cast into the oven to-morrow, should he not much more clothe you?*" From this it appears, that the lilies, when faded, were, like other common field flowers, used along with other things as fuel.

In the Song of Solomon, the bride compares herself with a *lily of the valleys*, ii. 1, because in these, they being well watered, flowers thrive better than in the plains, which, in Eastern countries, commonly are dry and parched by the heat of the sun. The lilies, which are cultivated in our gardens, are commonly white. But they are also to be found of other colours, such as red, orange-coloured, and yellow. One of the most beautiful species of lilies is that which is called *Crown Imperial*, (Germ. *Kaiserkrone*),⁵ which grows wild in the East, and with us

text. The Arabic name of the lily has been preserved in the Spanish *Azucena*.(τ)

⁴ *Athenæus*, B. XII. Cap. 1. Σούσον εἶναι τῆ Ἑλλήνων φωνῇ τὸ κρίνον. *Dioscorides*, B. III. cap. 116. Οἱ δὲ σοῦσινον καλοῦσι λείρινον κρίνον.

⁵ Κρίνον βασιλικόν in *Dioscorides*, l. c., *Linnaeus's Fritillaria imperialis*.

(τ) Or rather thus: In the Spanish, *Azucena*; and in the Portuguese, *Azucena*.—Tr.

is sometimes found in gardens. The stem, which bears the flowers, is of a finger's thickness, round, rather dark-red, and commonly three feet high. The flowers differ from the white lily only in colour. Crowns imperial are to be had, with yellow, and also with red flowers; these are the most common. They hang on the top of the stalk in the form of a crown, above which a tuft of leaves is prominent. Some have a double row of flowers. They do not always put forth their flowers in the same number, nor in the same order. The author of the Song of Solomon probably alluded to the red flowers of the crown imperial, when, in portraying the bodily charms of the bride, he made the bridegroom say, iv. 5; vi. 3, "*Thy breasts are like two roe-twins, feeding among lilies.*" And again, the bride says: "*His lips are like lilies dropping with liquid myrrh.*" This perhaps alludes to the circumstance, that every leaf in the flower of the crown imperial contains a watery moisture, which, particularly about noon, gathers together and forms a pearl, and bye-and-by falls down in clear and pure drops.⁶

⁶ Clusius Rarior. plantar. histor. L. II. Cap. 1. Singula floris folia interna parte in ipsis unguibus singularibus tuberculis candidis praedita sunt, quae meridiano etiam sole limpidissimam, dulcemque aquam exstillant, lachrymarum in morem, ut uniones propendentes videantur. Cfr. Steph. Souciet's Dissertation sur un revers des medailles d'Herodes I. dans laquelle on explique que c'est que le **לשן** ou Lys de l'Ecriture et des Hebreux, in his anonymously edited, Recueil de Dissertations critiques sur des endroits difficiles de l'Ecriture Sainte. (Paris, 1715, 4to.) p. 155, sqq.

*Lily work*⁷ is mentioned as decorating the columns of Solomon's Temple, 1 Kings vii. 19, 22, 26. *Gesenius* supposes,⁸ that these ornaments were Lotus-formed; for the lotus resembles the lily, and it was frequently used in Egypt to decorate the head-pieces of columns. But Hebrew architecture has a Phoenico-Egyptian character.

Shushan occurs as the name of a musical instrument in the superscription of some of the Psalms.⁹ If this instrument derived its name from a resemblance to a lily in respect of form, the name would denote a small *bell* or *cymbal*, of the same kind as those which, even in modern times, are used in Turkish music.

15. *Chabazzeleth*,¹ *Narcissus*; Germ. *Narzisse*; ²
(Fr. *Narcisse*.)

The above Hebrew name is, in the Song of Solomon, ii. 1, put along with the *Lily*, evidently as the name of a flower, and Isa. xxxv. 1, it is announced that, in the future golden age, the verdant desert shall be decked with this flower. The substantial part of the Hebrew name shows, that it denotes

⁷ מעשה שושן.

⁸ Hebr. and Chald. Manual Dictionary, p. 828, Third Edit.

⁹ Ps. lx. 1, שושן עדות, and Ps. xlv. 1; lxix. 1; lxxx.

1, שושנים.

¹ חבצלת.

² *Narcissus*, Celsius, P. I. p. 188, sqq.

a flower growing from a bulb.³ The Narcissus is such a flower; and that name, accordingly, the Chaldee and the Arabic translators have put for the Hebrew word.⁴ The Syriac translator makes use of the word *Chamzaloitho*, which, in reality, is identical with the Hebrew word;⁵ and, according to the testimony of Syriac-Arabic dictionaries, denotes the *Colchicum autumnale*,⁶ a plant resembling the *Crocus*, which is found also in our part of the world, grows from a bulb, and, in autumn, blossoms in the meadows, with a white and light-violet flower. As this plant, however, has no scent, and is not much esteemed, but the narcissus, which is akin to it, is much in request, on account of its sweet fragrance, the latter, no doubt, would with more propriety be associated with the lily in the afore-mentioned passage of the Song of Solomon. In the East, it fre-

³ For חֲבֵצֵלֶת is formed from בֵּצֵל, a *Bulb*: the guttural ח is sometimes put before *triliteras*, in order to form *quadriliteras* from them, as חֲשֵׁמִיִּם, חֲנַמְלָה, חֲדַקְלָה. See Gesenius's Gramm. p. 863.

⁴ The Chaldee Paraphrast puts נִרְקוּם. But Saadias and *Abulwalid*, the lexicographer, have النرحيس.

⁵ For in חֲבֵצֵלֶת the ב of the Hebrew word has been exchanged for the Syriac ח, a frequent exchange in Hebrew, Syriac, and Arabic words.

⁶ In German *Herbstzeitlose*. Cfr. the passage from *Bar Bahlal* in Gesenius's Commentary on Is. p. 924.

quently grows in meadows ;⁷ and Chateaubriand⁸ expressly mentions the narcissus⁹ amongst the flowers of the beautiful plain of Saron, which is mentioned as the domicile of the *Chabazzeleth* in the above quoted passage.

16. *The Rose*.¹

Jesus Syrach in xxiv. 18, makes Wisdom personified say, that she has taken root among the Jewish

⁷ Thus *Tavernier* (*Voyages*, T. I. p. 387) observes on the neighbourhood of *Firusabad* in Persia: Son terroir porte quantité de dattes et de fleurs de Narcisse, dont ceux du lieu font une huile de senteur, que les Dames recherchent fort. And about *Nisibis* in Mesopotamia, he says (p. 190): On y voit aussi quantité de fleurs jaunes, rouges et violettes, des tulipes de différentes couleurs, et anemones et narcisses.

⁸ *Itinéraire de Paris a Jerusalem*, T. II. p. 130.

⁹ *Sonnini* (*Travels*, Vol. II. p. 27) mentions an Egyptian plant, whose Arabic name, *Hablexiss*, somewhat resembles the Hebrew *Chabazzeleth*. But the Arabic name, as *Sonnini* himself observes, denotes a *kernel, pleasant to the taste*; accordingly, we

here have the Arabic words حب لذيذ . *Hhab laziz* contracted, and the name is essentially different from the Hebrew. This Egyptian plant is a species of *Santolina*. It is taken out of the earth in the beginning of November, and from its thin roots fleshy knobs of the size of a hazel-nut are torn off. These have an agreeable taste. Accordingly, this is a kind of *Cyperus esculentus*.

¹ In the other books of the Old Test. which are written in Hebrew, the rose is not mentioned; but only in those which are called apocryphal or deuterocanonical, and which are composed in the Greek language. The Greek name for the rose

nation, (ver. 16,) and grown up like a cedar of Lebanon, like a palm-tree on a water-bank, and *as a rose-plant in Jericho*.² From these words, it has been concluded, that these rose-stalks must have been distinguished for their beauty. But none of the many travellers who have visited Jericho and the neighbourhood of that city, have found any roses there. Still it is possible that, in former ages, while these regions were as yet populous and cultivated, rose-stalks of singular beauty may have been reared in the gardens of Jericho. But that plant which now is called the *rose of Jericho*, and which, however, does not grow near that city, but in the deserts of Arabia, and in other sandy places, is a small insignificant shrub, growing from a thick and hard root, not exceeding the length of a middle finger. This shrub has no particular stem, but a multitude of branches or rods, which all at once shoot from the earth. These are subsequent-

is *ῥόδον*, and a rose-plant is *ῥόδῆ*. In the Arabic language, the

expression *ورد*, *Uard*, denotes every species of roses. Cfr.

Hasselquist, p. 508, who observes, that this flower is much cultivated in Egypt on account of the rose-water which is prepared from it. In Palestine, Mariti (p. 558,) found the greatest quantity of roses in the hamlet of St. John, in the Desert of the same name. (See Rosenmüller's *Bibl. Geogr.* Vol. II. Pt. I. p. 125, forming part of the *Biblical Cabinet*.) In this place the rose-plants form small forests in the gardens. The greatest part of the roses reared there is brought to Jerusalem, where rose-water is prepared from them, of which the scent is so very exquisite, that in every part of Syria, and also in Cyprus, it is in request above all other rose-waters.

² Ὠς φυτὰ ῥόδου ἐν Ἰεριχῶ.

ly decked with a few straggling leaves, but a multitude of small flowers. Their first colour is reddish, but by and bye they become paler, and at last quite white. When this shrub is in blossom, it much resembles the elder flower, but it has no smell, and is only four or five inches high above the ground. When it has shed its flowers and becomes dry, the few leaves and all the flowers fall off, and nothing remains on the shrub but some small seed corns. The ripe fruit fascicle turns all its branches inwards, and arches them so that they form a ball or a globe, at the bottom of which the root is. After this manner they close themselves when the very hot season commences, and thus remain as long as the drought continues; but when it rains, and the soil is sufficiently moistened, they open again. When the shrub has become dry, and has stood longer than a year, the colour of its stems becomes dark; but as long as they are less than a year old they remain white. This plant is never subject to corruption and rottenness, however long it remains standing in the ground; and it keeps in preservation equally well though never so old, if it is plucked up or broken from the stem and carried away. If, in its dry and close state, it is put with its root into water, it by and bye commences to open; but it closes again when it is taken out of the water.³ If Sirach alluded to this

³ *Mariti*, p. 410. Arvieux (Remarkable Accounts, Vol. II. p. 156. Germ. Transl.) says, that it is difficult to conceive why this plant is called a rose, since it is nothing else but a small shrub, four or five inches in height, woody, branched and ash-coloured, but its leaves and flowers uncommonly small.

plant, he probably compared wisdom to it, because it is not easily subject to corruption.

Sirach in L. 8, compares the High Priest's ornaments with a *rose in the days of Spring*, and in xl. 17, he wishes, in regard to the pious, *that they may grow like a rose near a brook.*

It appears from the Book of Wisd. ii. 8, that it was a custom with the Hebrews, as well as with the Greeks, to deck one's self with roses in convivial parties; for, in this passage, revellers encouraging each other to a merry enjoyment of life, say to each other: "*Let us crown ourselves with roses ere they fade.*"

See also Maundrell in Paulus' Collection, Vol. I. p. 265, and the note by an author skilled in Natural Philosophy, Vol. II. p. 268.

SECTION FIFTH.

PLANTS FROM WHICH ODOROUS RESINS AND OILS ARE PREPARED.

I. *Basam*, also *Bosem*,¹ *Balm*. Germ. *Balsam-
strauch*.² (French *Baume*.)

THE above Hebrew words properly denote *fragrance* in general, and odorous production of the vegetable kingdom, *Spices*, (as in Exod. xxxv. 28. 1 Kings x. 10;) but in some passages of the Song of Solomon, these names most probably denote a particular plant. Thus we read, v. 1, *I gathered my myrrh with my Basam*, and in verse 13, and also in vi. 1, (v) *Basam beds* are mentioned. The Arabic name,³ which is similar in sound, leaves no room for a doubt, that here the Balsam shrub is meant. “This shrub,” *Abdollatif*⁴ says, “is about an ell high. It has a double bark; the outer is red and thin, the in-

¹ בָּשָׁם, בָּשָׁם.

² *Amyris*. It is not to be found in Celsius.

(v) Chap. vi. ver. 2, in the English Bible.—*Tr.*

³ بِشَام.

⁴ *Memorabilia of Egypt*, p. 24 of the Arabic original. See Rosemüller's *Bibl. Geogr.* Vol. I. Pt. V. p. 45 in the original; see also the translation in the *Biblical Cabinet*.

ner green and strong. Chewing these, produces an oily taste in the mouth, and an aromatic smell. The leaves resemble those of the rue. The balsam is gathered about the dog days after the following manner: the shrub having been deprived of its leaves, incisions are made in the stem with a sharp-pointed stone. This must be done with caution, in such a way, that the double bark is cut through without hurting the wood; for if the wood is cut, no balm is obtained. After the incision has been made in the manner here mentioned, they wait till the juice drops out of the wood, then wipe it off with the finger, and what they thus gather, they rub off on the brim of a horn. When the horn is full, the contents are poured into glass bottles, and this is continued without intermission, as long as any juice flows from the shrub. The bottles are buried in the earth, until the arrival of a particularly hot day; they are then taken out and exposed to the heat of the sun. They are every day examined, and then oil is discovered floating on the top of a watery substance, which is mingled with earthen particles. The oil is removed, and the bottles again exposed to the sun, and this is continued until no more oil appears. Then all the oil that has been gathered is boiled and brought to the warehouses." Abdollatif adds, that he has read in Galenus, that the best balsam is produced in Palestine; but now, (in Abdollatif's age,) he says, that no more balsam is found in that country. *Burckhardt*⁵ however, was informed at Tibe-

⁵ Travels in Syria, p. 564. Germ. Transl.

rias, that the balsam-shrub was there in a very thriving state, and that several people had it in their gardens. It was described to him as a low shrub, whose leaves resembled those of the vine, bearing a fruit three-inches long, of a cucumber form, which, when ripe, is of a green colour, with a yellow shade. This fruit is gathered in the month of June; then oil is poured over it, and it remains thus for some time exposed to the sun. After that, the fluid yielding the balsam is expressed. It is apparent that this is a different plant from the one described by Abdollatif, which, in his time, was carefully reared only at Ain-Shames in Egypt, in an enclosed piece of ground. *Belon's*⁶ description of the balsam shrubs which he saw (in the earlier part of the sixteenth century,) in the Balsam gardens of Matarea, a village near Kahirah, agrees with Abdollatif's description. These shrubs were only a foot high, and of about a thumb's thickness, although, at other times, they reach an height of two or three ells. When they have attained the height of about one foot, they put forth a multitude of branches, which commonly are not much thicker than a goose-quill. The balsam shrubs of Matarea had shortly before been pruned; for this plant is, in this respect, similarly conditioned with the vine, that it must be pruned every year in order to prevent it from growing wild. The shoots of the balsam shrub had a bark, the upper part of which had a reddish appearance; their leaves were green,

⁶ Observations, fol. 168 vers. in the edition of 1554, and Paulus' Collection, Vol. IV. p. 188, sqq.

and arranged after the same manner as on the mastic tree, so that the one was placed on this, and the corresponding on the opposite side, as on the rose-stalk, on the ash, and on the nut-tree. The leaves were not larger than on peas in the husks, and they resembled the leaves of the rue, as has been correctly observed by Pliny, Theophrast, and Dioscorides. Belon tasted the branches and the leaves, and found that the taste of both was somewhat astringent and oily, and at the same time aromatic. Besides the aforementioned bark of reddish colour, the branches have within it a second, which has a green appearance, immediately touching the wood, and covering it as it were, with a lining of vellum. The taste of this bark is intermediate betwixt that of frankincense and the taste of the leaves of the turpentine-tree. Rubbed between the fingers, it smelled like cardamomum. The wood within this bark is white, and has neither taste nor smell.

The *Balsam-tree*, from which is obtained the *Balsam of Meekah*, and which grows only in Yemen, *i. e.* Southern Arabia,⁷ is different from the balsam shrub above described. It attains the height of a pomegranate-tree, which it pretty much resembles, by its long and supple boughs and branches, which are but scantily furnished with small leafets similar to those of the rue, but of a beautiful green colour; the wood

⁷ *Amyris opobalsamum*, Forskäl, *Flora Aegypt. Arb.* p. 76, *Arbor mediocris. Rami valde divaricati: cortex laevis, cinereus, ruptus odore et succo opobalsamum prodens, cet.* Cfr. Linnæus' *Dissertat. Opobalsamum Declaratum* in his *Amœnitatt. Academ.* T. VII. 55, sqq.

is reddish and resinous, and the small white flower possesses the most delightful fragrance. The fruit is a small, brown nut, merely covered with a dry membrane, and within the nut there is an almond; sometimes the almond is wanting, and in its place there is found a yellowish, sharp, and bitter juice.⁸ *Burckhardt*⁹ observes, that the tree from which the genuine balsam of Mekkah is obtained, grows on the mountains about *Szafra* and *Beder* in *Hedshas*, and that it is called *Beshem*.¹⁰ It is said to be ten to fifteen feet high, the stem smooth, and the bark thin. About the middle of summer, small incisions are made in the bark, and the sap which immediately flows out, is scraped off with the thumb-nail and put into a vessel.

From all these varying accounts, it appears that the balsam is not obtained only from *one* plant. Even *Dioscorides*¹¹ and *Pliny*¹² distinguish three species of balsam plants, which differ as to height, strength, bark, and foliage.* *Pliny* says, that Judæa is the only country in which balsam is pro-

⁸ *Mariti*, p. 403. Cfr. *Bruce's Travels*, Vol. V. p. 38. Germ. Transl. together with an engraving, Tab. 2.

⁹ *Travels in Arabia*, p. 309.

¹⁰ 

¹¹ B. I. cap. 13; ὁπός ἐστι νάρθηκος ἐν Συρίᾳ γενομένου, ἢν ἔνιοι μετώπιον καλοῦσιν.

¹² *Hist. Nat. Lib. LXII. cap. 25, § 54.*

* *Forskäl*, l. c. describes the same number of species. The first, (*Amyris Opobalsamum*,) which he first saw in Yemen, is of a middle size; the second, (*Amyris Kataf*,) is white in the wood; the third, (*Amyris Kafal*,) is a tall tree, of which the wood is red.

duced.^{12b} Accordingly, the Arabic balsam was as yet unknown to him. *Strabo*¹³ mentions a balsam garden near Jericho. The balsam plant alluded to in the above quoted passage of the Song of Solomon, probably is the same as that which was mentioned to Burckhardt at Tiberias. (See above, p. 148.)¹⁴

2. *Chelbenah*,¹ *Galbanum*.²

Chelbenah is mentioned, Exod. xxx. 34, as one of the ingredients from which the perfume for the sanctuary was to be prepared. This name has been preserved in the Greek word *Chalbane*,³ which denotes a gum, obtained by means of an incision in the bark from a species of *Fennel* (*Ferula*);⁴

^{12b} L. c.: Omnibus odoribus praefertur balsamum, uni terrarum Judaeae concessum, quondam in duobus tantum hortis utroque regio, altero jugerum XX. non amplius, altero pauciorum.

¹³ Book XVI. cap. 2, § 41.

¹⁴ As to צָרִי or צָרִי, (which many consider as the proper and genuine Balsam of Mekkah, or Opobalsamum,) see below the last article of this section.

¹ חֶלְבֵנָה.

² *Bubon Galbanum*. Celsius, P. I. p. 267. Cfr. J. D. Michaelis' Supplemm. p. 753, sqq.

³ Χαλβάνη, says Dioscorides, B. III. cap. 97.

⁴ Pliny (Hist. Nat. Lib. XII. cap. 25) calls the shrub *Stagonitis*. According to Moryson's description (in Scheuchzer's Phys. S. II. p. 36 of the Abst. by Donat), the Galbanum shrub belongs to the *Umbelliferæ* family of plants. The root is long, and of an arm's thickness, and there flows out of it a

(Germ. Gertenkraut), which is a shrub growing on Mount Amanus in Syria. This resin is fat, tough, granulous, white at first, but, when it gets old, yellow with white spots; its taste and scent is sharp and bitter.⁵ By the disagreeable stench which this gum emitted when kindled, snakes were driven away from stables.⁶ But, mixed with other fragrant substances, as was the case in the holy perfume, it strengthened the perfume, and made its effect more lasting.⁷

fat, thick, and resinous milk. The leaves are placed on long hollow petioles, of a finger's thickness: they are broad, but divide themselves into many thin leaves, almost resembling the fennel: on the under side they are whitish blue. The stem is five or six ells high, thick, and knotted; it has a spongy pith, and is divided at the top. On the uppermost peduncles, which are divided like an umbrella, there are yellow florets, with revolute leaves, to which succeed, in due season, broad, leafy, round, blackish, striped seeds. An engraving of this plant is to be seen in Jacquin's Hort. Vindobon. T. III. Tab. 36.

⁵ The Hebrew name חֶלֶב בְּנֵת is derived from חֶלֶב ,

Cheleb, fat.

⁶ Virg. Georg. III. 415.

Disce et odoratam stabulis accendere cedrum,
Galbaneoque agitare gravi nidore chelydros.

Calpurnius, Ecl. V. 90.

Lurida conveniet accendere Galbana septis;
Obfuit iste malis odor anguibus.

⁷ Pliny, Hist. Nat. Lib. XIII. Cap. 1. § 2. Resina aut gummi adjiciuntur (hedysmatis) ad continendum odorem in corpore: celerrime is evanescit atque defluit, si non sunt haec addita. J. D. Michaelis (l. c. p. 755) gives an account of some

3. *Lebonah*,¹ *Frankincense*.²

As with all known nations of antiquity, so with the Hebrews too, incense was used in sacrifices for fumigations ;³ and it also was one of the ingredients in the perfume which was to be prepared for the sanctuary, Exod. xxx. 34. Accordingly, it is frequently mentioned in the Old Test. in passages alluding to sacrifices ; *ex. gr.* Levit. ii. 1, 2, 15, 16 ; v. 11 ; vi. 8. Isa. xliii. 23 ; lxvi. 3. Frankincense is a vegetable resin, which is glittering, and of a pale yellow colour. Its taste is bitter and resinous, but when it is burned its scent is delightful. The Hebrews obtained their frankincense from Arabia, and, indeed, particularly from Saba (Isa. lx. 6. Jerem. vi. 20) ; and this district of Arabia is also mention-

experiments relative to this subject which he made, with the assistance of an apothecary : Omnes species suffitus sacri a Mose commemoratae quum haberi non possent, primo tribus partibus thuris et myrrhae addidimus unam galbani ; gratior etiam, et ad nostra suffimenta proxime accedens, nec tamen dulcis.

¹ לְבוֹנָה.

² *Arbor thuris, thus.* Celsius, P. I. p. 231.

³ Tibull. Lib. I. Eleg. 2.

Uruntur pia thura foqis,

————— largoque referti

Thure vaporatis lucent altaribus ignes.

Ovid. Trist. Lib. V. Eleg. 5, 11.

Da mihi thura, puer, pingues facientia flammæ,

Quodque pio fusum stridat in igne merum.

ed by Strabo,⁴ as one in which frankincense is produced. The ancients possessed no authentic information respecting the plant from which this resin is procured. Theophrastus says,⁵ that the frankincense-tree is not large; that it attains the height of about five ells; that it has many branches, and leaves like those of the pear-tree,^{5a} but smaller and of a grass colour; that the bark is smooth like the bark of the laurel. He says, that, according to other accounts, it resembles the mastick-tree, and that its leaves are of a reddish colour.(φ) Diodorus Siculus⁶ describes it as a small tree, resembling the Egyptian hawthorn, with gold-yellow leaves, resembling those of the woad. Pliny⁷ again has other descriptions different from these, adding, that the ambassadors, who in his time arrived from Arabia, had made every thing still more uncertain, and that this was the more surprising, since they had brought along with them rods of the

⁴ B. XVI. Cap. 4. § 19.

⁵ Hist. of Plants, B. IX. Cap. 4.

^{5a} *Chardin (Voyages, T. III. p. 295, Langlés' Edit.)* says, that the frankincense-tree, which grows on the desert mountains of Caramania, resembles a large pear-tree.

(φ) In an American work on botany, written by Mrs. Almira Hn. Lincoln, a female professor of Troy, and published at Hartford 1835, I find the *Thuia occidentalis*, the American Arbor Vitæ, or frankincense-tree, thus described:—"Branches ancipetal; leaves imbricated in four rows, ovate-rhomboidal; strobile ovate. [It grows in] mountains. A small tree with very tough branches, leaves resembling scales."—*Tr.*

⁶ B. V. Cap. 41.

⁷ Hist. Nat. Lib. XII. Cap. 31.

frankincense-tree. According to the information collected by *Niebuhr*,⁸ that species of frankincense, which the Arabs call *Liban*,⁹ or *Oliban*, is now cultivated only on the south-east coast of Arabia, particularly in the province of *Shär*; and this species is very bad. In Arabia, however, many other kinds of frankincense are to be obtained from Habesh (Abyssinia), from Sumatra, from Siam, and from Java, and amongst these there is a species which resembles the English, and which greatly resembles the *Oliban*. Of this a great quantity is sent across the Arabic and Persian Gulf to Turkey; and the most inferior of the three sorts, into which merchants use to divide the Benzoin, is considered as preferable to the *Oliban* of Arabia. From this it almost would appear that Europeans call Habesinian and Indian frankincense Arabic, because it is brought from Arabia. The Arabs call the most excellent species of frankincense *Cundur*,¹⁰ and that this is an Indian

⁸ Descript. of Arabia, p. 143, cfr. pp. 282, 283, 284, 296.

⁹ لَبَان. The Arabic botanist, *Abul-Fadli*, observes (in Celsius, P. I. p. 231), that the plant has obtained this name from the Greek word *λίβανος*, and that the Arabs themselves call it ^{د د د} كندر, *Condor*. But the Hebrew name ^ל לְבֹנָה, which so much resembles the Arabic, ^ل لَبَان, is surely not derived from the Greek; but this rather is, in both languages, the indigenous name of a produce, with which the Greeks first became acquainted, through intercourse with the Eastern countries. Neither is the word *Condor*, as we shall see immediately, an indigenous Arabic word.

¹⁰ See the next preceding note.

production appears from Colebrooke's¹¹ observation : that in Hindu writings on medicaments, an odorous gum is called *Cundururu*, which, according to the Indian grammarians, is a Sanscrit word. They unanimously state it to be the produce of a tree called *Sallaci*, and in the vulgar language *Salai*. The tree grows in the Indian mountains, and is one of a considerable size.¹² By incisions in the bark a very odorous gum is obtained, which the spice-merchants of London recognized as *Olibanum*, although it had been sent to England as an entirely different species of perfume.

4. *Lot*,¹ *Ladanum*.²

Amongst the spices, which, according to Gen. xxvii. 25, the Caravan of *Israelite* or Arabic merchants, to whom Joseph was sold, conveyed from Gilead to Egypt, *Lot* is also mentioned ;(χ) and this

¹¹ In a Treatise on Olibanum or Frankincense, in the Asiatic Researches, T. IX. p. 377, sqq. 8vo. Edit.

¹² Dr. Roxburgh, in the treatise quoted in the preceding note, furnishes a complete scientific botanical description of this tree, and he gives to it the name of *Boswellia serrata* : his description is accompanied by a coloured engraving.

¹ לוֹט.

² *Cistus Ladanifera*. Celsius, P. I.

(χ) Instead of Gen. xxvii. 25, we should read Gen. xxxvii. 25. *Israelite* merchants seems also to be a slip, and we ought to read, as in the English Bible, *Ishmaelites* : the text has יִשְׁמַעֲלִים (*Ishmeelim*). As to the goods or spices of these merchants, the English version is very erroneous ; for,

same article was also amongst the costly productions of Palestine, which Jacob, according to Gen. xliii. 11, sent as presents to his son Joseph in Egypt. The resemblance of the Hebrew word to the Greek *Ledos* and *Ladanon*³ leaves no room for a doubt, that it denotes the odorous, greenish, soft, and fat resin which is known under these latter names. This resin is found on the branches of the *Cistus*, a plant much resembling the sage, whose blossom has a very similar appearance to that of our diminutive wild hedge-rose. Early in the morning, ere the sun dries up the moisture, which many consider as the dew fallen on the plant, the herdsmen drive their goats to their pastures, and, as the ladanum at that time is soft and adhesive, it sticks to their beards; and that which is thus gathered from the beards of the goats is the most pure. While the goats are feeding, the

instead of "*spicery, and balm, and myrrh,*" the correct translation would be "*Tragacanth Gum, and Balm of Gilead, and Ladanum.*—*Tr.*

³ Ἀήδης, λάδανον, from the Arabic لاذن. The proper root and substance of these names is *Led*. It cannot be considered as an objection against the identity of these names, that the Hebrew has the hard consonant (*t*), instead of the softer (*d*), since many instances of the permutation of *d* and *t* are to be found in these as well as in other languages; cfr. *Gesenius*, Hebr. Germ. Manual Dictionary, p. 171, 3d Edit. J. D. Michaelis has, in his *Supplem.* p. 1424, satisfactorily confuted the opinion of some authors, who believed that לן was the *Lotos* plant, which is indigenous in Egypt. But equally untenable is Michaelis's own opinion, viz. that the Hebrew name denotes the *Fistachio-nut*.

herdsmen themselves are also busy gathering. They fasten a goat-skin bundled together on a small stick, with this they go from one plant to another, and remove the *ladanum*. On account of the wind during the day scattering dust on the plants, the *ladanum* collected from these is always more or less mixed with earth; it is therefore purified by fire and oil; it thus becomes tougher and softer, and still more odorous.⁴ The *ladanum* used in Europe is gathered in the Greek Isles, particularly on the Isle of Cyprus. But it is also, according to Herodotus⁵ and Pliny,⁶ found in many parts of Arabia, and both these authors agreeing in their description of the manner in which the *ladanum* is obtained, furnish that account of it which has here been given. It is well known

⁴ Mariti's Travels, p. 153. Pocock (Descr. of the Or. Vol. II. p. 334), however, observes that the above stated method of procuring and purifying *ladanum* is very troublesome, and that it still never is rendered perfectly pure and sweet-scented. He says, that, for this reason, both in Cyprus and in the other Greek Isles, they make use of a curved bow, on which they tie woollen threads about three feet in length. In the month of May they draw this wool over the leaves, and when the balmy substance has stuck to it, it is exposed to the sun, and being heated, it is separated from the wool. Almost in the same manner, Belon (Observations, L. I. ch. 7. p. 15) describes the method of procuring *ladanum*. In order to increase the weight of this gum, it is frequently mixed with sand, and this the druggists call *labdanum en tortis*. But when the sand is cleansed away, it becomes like soft bees-wax, and is called *labdanum liquidum*.

⁵ Thal. cap. 112.

⁶ Hist. Nat. Lib. XII. cap. 17. See also Dioscorides, Lib. I. cap. 129.

that ladanum is used both externally and internally as an efficacious medicine, and the smoke of it is said to be good for the eyes.

5. *Mor*,¹ *Myrrh*.

Amongst the ingredients, from which the oil destined for religious anointings, was to be prepared, *Mor* is also mentioned Exod. xxx. 23, and from it is derived the word *Myrrh*, which has been received in almost all European languages, ancient as well as modern. An Arabic botanist, *Abulfadli*,³ says that *morr*⁴ is the Arabic name for a tree resembling the acacia, which is provided with thorns, and out of which, flows a white sap, which coagulates and becomes a gum. *Pliny* describes the myrrh tree,⁵ as a diminutive one, about five ells in height; he says that the stem is *crooked*(∨) and twisted, and that, according to some authors, its bark is smooth, and according to others, rough and thorny; that the leaf resembles that of the olive, but is curled and prickled; that the bark is ripped up twice every year, from the root to the branches, and that then the

¹ מֹר.

² Myrrha, Celsius P. I. p. 520.

³ Celsius l. a, p. 521.

⁴ مَرَّ

⁵ Hist. Nat. Lib. XII. cap. 15, (§ 34.)

(∨) Rosenmüller seems to have had a copy which read, *candice curvo et intorto*; but the right reading, no doubt is, *candice duro et intorto*, and accordingly, *Pliny* said, that “the stem of the myrrh tree was *hard* and twisted.—*Tr.*”

purest myrrh, which he calls *Stacte*, exudes from it. According to Dioscorides,⁶ the myrrh tree resembles the Egyptian Acacia. He mentions three species of gum, exuding from it, and the best he also calls *Stacte*. Diodorus Siculus says,⁷ “ that the myrrh tree resembles the mastick tree, but has a smaller and closer leaf. When the earth is dug up about its roots, a sap issues from it. If the tree is planted in a good soil, this is done twice a year, in spring, and in autumn. The myrrh collected in spring, is reddish, on account of the dew, but other myrrh is white.” The tree grows, according to Pliny, in many parts of Arabia; and, if Belon’s⁸ observation is accurate, it also grows in Palestine. For he says, that near Rama, there grows a thorny shrub, of which he believes that it produces myrrh; that it is crooked, has many branches, and is armed with sharp prickled thorns; that the leaves resembled Acacia leaves, only that they were somewhat larger.⁹

According to Exod. xxx. 23, *the most genuine myrrh*, was to be used for the oil of holy ointment. Thus Luther correctly translates the Hebrew expression, which properly denotes *spontaneously pro-*

⁶ B. I. cap. 78. ⁷ Biblioth. B. V. cap. 41.

⁸ Observations, L. II. chap. 80.

⁹ *Bruce* describes a tree yielding an abundance of very sweet scented myrrh, (Travels, B. V. p. 43, 44, Germ. Transl. by Volkmann), which, however, does not grow in Arabia, but in the Habessinian province Taltal, where it is indigenous. It attains a great height, and equals the English elms. The gum bursts in such a quantity out of every part of the stem, that it covers it every where, in the shape of large balls; in the same manner it also covers the principal branches.

fluent myrrh,¹⁰ viz. *myrrh*, which without any previous incision, bursts out through the bark, and is considered as being of the best quality. The same kind of myrrh is in the Song of Solomon, v. 5, 13, called *Stilicidious* or *profluent myrrh*.¹¹

Myrrh oil was used as a perfume. The wives of the kings of Persia were, according to Esth. ii. 2, perfumed with myrrh oil,¹² ere they were brought before the king. Royal garments were also perfumed with myrrh, Ps. xlv. 9. The harlot introduced in Prov. vii. says ver. 17, that she has perfumed her couch with *myrrh*. From Joh. xix. 39, it appears that myrrh was used for embalming dead bodies.(ω) It was considered as one of the most costly of spices, and on that account it was also amongst the presents

¹⁰ מֵר-יָדָרוֹר. The Greek Translator of Alexandria,

renders it *σμούρη ἐκλεκτή*, *choice myrrh*. Cfr. A. Th. Hartmann's *Hebrew Woman at her Toilet*, Vol. I. p. 303.

¹¹ מֵר עֹבֵר. "It is remarkable that Dioscorides calls

the most beautiful, (*λιπαρωτάτη*) species of myrrh, *γαβριζία*,

which probably is identical with the Arabic *سببیر* *flens*, or *سببيرة*

lacrymae." Döpke in his *Comment. on the Song of Solomon*, p. 165.

¹² בְּשֵׁמֶן הַמֵּר.

(ω) See also Herodot. *Euterpe*, chap. 86. *ἔπειτα τὴν νηδὺν σμούρης ἀκηράτου τετριμμένης, καὶ κασίης, καὶ τῶν ἄλλων θυμάτων, πλὴν λιβανωτοῦ, πλῆσαντες, συρράπτουσι ὀπίσω.* This mode of embalming, the Jews probably adopted from the Egyptians, like so many other customs.—*Tr.*

which the wise men of the East offered to Jesus, as the new-born king of the Jews, Matth. ii. 11.

St. Mark the Evangelist, relates xv. 23, that the Roman soldiers presented to the crucified Jesus, *wine mixed with myrrh*,¹³ and it is commonly believed that they did so, for the purpose of depriving the sufferer of sensation, and of rendering him in some degree less sensitive of pain. Certainly it is stated, in the Talmud,¹⁴ that those who are led to execution, receive a cup of wine with frankincense, for the purpose of depriving them of the sense of pain. But since, according to St. Mark, not frankincense, but myrrh, was mixed in the wine offered to Jesus, it is more probable that the soldiers presented it to him as a strengthening remedy, lest he should be overpowered by weakness, ere the punishment was completed. The ancients ascribed such a strengthening power to myrrh, that they believed that, after using it, man could endure even the greatest pain. For this reason, Apuleius says, of a priest of the Syrian goddess: "he disfigured himself with a multitude of blows, having previously strengthened himself by taking myrrh."¹⁵ And, in another place, "having previously strengthened himself by taking myrrh, he was not overpowered either by the many blows, nay, nor even by the fire!"¹⁶

¹³ Οἶνον ἐσμυρηνισμένον. ¹⁴ The Treatise Sanhedrin. cap. 6.

¹⁵ Metamorph. L. VIII, Indidem sese multimodis commaculat ictibus myrrhæ præsumptione præmunitus.

¹⁶ L. X. Obfirmatus myrrhæ præsumptione multis verberibus, ac ne ipsi quidem succubuit igni.

6. *Nataf*,¹ *Storax Gum*.²

One of the ingredients from which the perfume, which was destined for fumigations in the temple, was prepared, is in Exod. xxx. 34, called *Nataf*. This Hebrew word, which properly denotes a drop, is by the most ancient Greek translator, rendered *Stakte*, by which, according to Dioscorides,³ in the first place is denoted, the resin of fresh myrrh, mixed with a little water, and squeezed out through a press. It is," he adds, "very odorous and precious, and of it alone consists that ointment which is called *Stakte*." This, however, would not be suited for the preparation of the perfume, and it also has another Hebrew name, for it is called *Mor Deror*.⁴ But the Greeks also called *Stakte*,⁵ a species of *Storax gum*, which Dioscorides describes,⁶ as transparent like a tear, and resembling myrrh. This agrees well with the Hebrew name. Storax gum also, like frankincense, was roasted, and used for fumigations.⁷ The tree yielding this gum is in

¹ נָטַף.

² Στακτή, Celsius, P. I. p. 529.

³ B. I. cap. 74.

⁴ See Note 10 of next preced. Art.

⁵ B. I. cap. 8. (περὶ στόρακος) Εὐρίσκεται δὲ καὶ δάκρυον κόμμι ἰοικὸς, διαυγές, σμυρνίζον.

⁶ Salmasius Exercitatt. Pliun. T. I. p. 540, sqq. and Homonym. Hyl. iatr. p. 149, sqq. cfr. Hartmaun's Hebr. Wom. at her Toilet, Vol. III. p. 111.

⁷ Dioscorides, l. c. Καίεται δὲ καὶ ὀπτᾶται, καὶ φάγγεται, καὶ θαλοῦται ὡς λίβανος, ἀρμόζει δὲ ἢ αἰθάλη πρὸς αὐτὴν καὶ ἢ τοῦ λιβάνου.

Hebrew called *Libneh*: see farther regarding it in the *tenth* section.

7. *Necoth*,¹ *Tragacanth Gum*.

Necoth is mentioned among the goods which the Arabic merchants, to whom Joseph was sold, conveyed to Egypt, Gen. xxxvii. 25, and this article was also amongst the presents which Jacob sent to Joseph into Egypt, Gen. xliii. 11. The Arabic word² which is analogous to the Hebrew, denotes that gum which is obtained from the *Tragacanth*, or (as it is commonly called by way of contraction), *Traganth* shrub (Germ. *Bocksbornstaude*,)³ and which grows on mount Lebanon,⁴ in the isle of Candia,⁵ and also in southern Europe. Dioscorides⁶ describes it as a low shrub, whose strong and wide spreading branches almost lie on the ground, and are covered with many small thin leaves, amongst which there are concealed, white, erect, and strong thorns. He adds, that the gum is obtained by means of incision in the root.⁷ But Tournefort, in describing the Candian *Tragacanth*, relates, that in the end of

¹ נִכּוֹת. ² نَكَاح and نَكَاحَة.

³ *Astragalus verus* s. *tragacanthae*.

⁴ *Rauwolf*, p. 281, describes three species of *Tragacanth*, which he found on mount Lebanon.

⁵ *Theophr.* Hist. of Plants, B. IX. cap. 1, and *Tournefort*, Voyages, T. I. cap. 22.

⁶ B. III. cap. 23.

⁷ "Ἔστι δὲ ἡ τραγάκανθα δάκρυον τῆς ρίζης ἀποτμηθείσης ἐπισυμ-
ιστάμενον

June, and in the following month, the juice of the plant being condensed by the heat, bursts the vessels in which it is enclosed, and gathers in masses, not only on the stem and on the branches, but also in the interstices of the fibres, and even in the pores of the bark, and that in the air, it coagulates in lumps, or in twisted pieces of greater or lesser length, which spontaneously fall off. The Tragacanth gum, having no smell, and being of a weak sweetish taste, but tougher and more mucilaginous than the gum Arabic, was, however, not used for fumigations, but, according to Dioscorides, mixed with honey, as a medicine against cough and roughness in the throat, and likewise against diseases of the eyes.

8. *Nerd*,¹ *Spikenard*.²

The Spikenard is mentioned in the Song of Solomon, i. 12; iv. 13, 14, as a plant exhaling an agreeable scent. It is a species of Valerian (*Valeriana*), peculiar to hither India: its Indian name is *Dshatamansi*.³ The root leaves, shooting up from the

⁸ *Bockhart's* opinion, Hieroz. P. II. L. IV. cap. 12, T. III. p. 400, Leipz. Edit.) that נבאת denotes Storax, which Celsius has categorically adopted, is untenable, cfr. Dr. Rosenmüller's note on the passage, p. 401, where several other opinions are also stated.

¹ נרד.

² *Nardus Indica*, *Spica nardus*, Celsius, P. II. p. 1, sqq.

³ *Valeriana Jatamansi* floribus triandris, foliis cordatis quaternis, radicalibus petiolatis. See *Sir William Jones* on the

ed by way of Arabia to southern Asia, and thus it reached the Hebrews.⁶ The ointment prepared from the oil of the spikenard root was, even by the Romans, considered so precious, that Horace promises to Virgil a whole *Cadus*(α) of wine for a small onyx-box full of spikenard.⁷ Judas, who afterwards betrayed his master, valued at three hundred denarii, *i. e.* about fifty rix-dollars, the box of genuine spikenard,⁸ with which Mary, the sister of Lazarus, anointed the Saviour at a feast, Mark xiv. 3, 4, 5. John xii. 3, 4, 5. It was also a Roman custom in festive banquets, not only to crown the guests with flowers, but also to anoint them with spikenard.⁹

⁶ The word *Nard*, according to Anderson (see Sir W. Jones, l. c. p. 405), is derived from the Tamulic language, in which words commencing with *Nar* convey the notion of *fragrance*, or *agreeable scent*, as for example, *Nartum pilla*, the *Melissa*, *Nartei*, a citron; and *Nartu* is put in the Tamulic version of the Bible for *Nard*.

(α) The *Cadus* contained twelve *Congii*, and the *Congius* six *Sextarii*; but the *Sextarius* is about a *pint*; thus Horace offered about 36 quart bottles of wine.—*Tr.*

⁷ *Carm. L. IV. Carm. 12. Vs. 16, 17.*

— Nardo vinum merebere,
Nardi parvus onyx eliciet cadum.

⁸ *Νάρδου πιστικῆς** as to this expression see Celsius, l. c. p. 6.

⁹ Horace, *Carm. L. II. Od. 11.*

Cur non sub alta vel platano, vel hac
Pinu jacentes sic temere, et rosa
Canos odorati capillos,
Dum licet, Assyriaque nardo
Potamus uncti?

9. *Zeri*, also *Zori*,¹ *Zackum-oil*, *Balm of Gilead*.

Zeri is also mentioned among the spices which the Arabic merchants, to whom Joseph was sold, conveyed from Gilead to Egypt, Gen. xxxvii. 25; and Jacob likewise sent the same, among the costly produce of Palestine, as a present to his son in Egypt, Gen. xliii. 11. Ezechiel, in xxvii. 17, mentions it among the goods which Judea brought to the markets of Tyre; and Jeremiah, in viii. 22; xlvi. 11; li. 8, speaks of it as a remedy for healing wounds, brought from Gilead. Palestine has such a remedy in the oil, which is pressed out of the fruit of the *Zackum* tree.² This tree very much resembles the plum tree, and it has many thorns, four or five inches long, which it puts forth below each of its branches. The bark of the tree is grated; it remains green as long as the tree stands in the ground,

Tibull. L. III. Eleg. 7.

Jamdudum Syrio madefactus tempora Nardo
Debueram sertis implicuisse comas.

¹ זָרִי, זָרִי, זָרִי.

² زقوم

This tree is the *Elæagnus angustifolius* of Linnæus, the narrow-leaved Oleaster, or wild olive-tree, the Myrobalanus of the ancients, described by Pliny, *Hist. Nat. Lib. XII. cap. 21. § 46.* Cfr. Oedmann's *Sammlungen aus der Naturkunde*, Pt. III. cap. 16.

but when it is cut down, it becomes in a short time pale and yellowish, first on the outside, and then internally. The interior is yellow, and almost like the box-tree, and although it is not quite as hard, it receives a beautiful polish and lustre. The leaves resemble olive leaves, but are somewhat more narrow; they are acuminate, almost prickled, and also greener than the leaf of the olive. The flowers are white; the fruit may suitably be compared to acorns without a cup. Immediately under the shell there is a kind of pulp, or fleshy substance, which, when it is dried, shrinks almost into nothing; it lies round a nut, much resembling an olive kernel, but thicker, which contains a very fat and oily almond, covered with thin membranes. The oil which is pressed out of it, the Arabs hold in such a high esteem, that, amongst articles considered by them as most indispensable, they even prefer it to the balm of Meccah, because they find it very efficacious against contusions and wounds.³ The Arabs pound the kernel of the fruit in a mortar, cast the pounded mass into hot water, and collect the oil, which then remains floating on

³ This is supported by the experience of *Maundrell* (see *Paulus' Collect.* Vol. I. p. 110) and *Mariti* (p. 415). The latter states, that a Venetian, having fallen from his horse in his journey from Jericho to Jerusalem, hurt his chest dangerously, which caused to him anxiety and pain, and that he five days successively took every morning a spoonful of *Zackum oil*, and felt such a relief from it, that on the third day the anxiety had ceased, and on the fifth he was totally free from pain.

the top.⁴ While it is fresh it has, both in taste and colour, a great resemblance to sweet almond-oil; but it requires some days to become clear. The Arabs sell it in skins, but often adulterated with olive-oil, and purchasers therefore insist on its being pressed in their presence. Many travellers have found the Zackum-tree in great abundance in the country about Jericho.⁵ Pliny relates, that it also grows in Stony Arabia (Arabia Petræa), and that the oil prepared from it is called the Syrian oil.(β) There is no reason to doubt, that, in former times, the Zackum-tree was to be found in abundance in Gilead (modern Dshelad), on the eastern bank of

⁴ This is also supported by Pliny's testimony, l. c. : Unguentarii tantum corticem premunt; medici nucleos, tundentes affusa eis paulatim calida aqua.

⁵ Ex. gr. *Maundrell, Mariti* (see above, note 3), *Pococke* (Descr. of the Or. Vol. II. p. 47), *Hasselquist* (Travels, p. 150); see also *Arvieux's* Remark. Accounts, Vol. II. p. 155.

(β) Pliny (Lib. XII. cap. 21. § 46) does not say that *the oil is called the Syrian oil*, but that "the nut of the *Myrobalanum*, which grows in Arabia, is called the Syrian;" a circumstance seeming to indicate that the *Myrobalanum* had been introduced from Syria into Arabia. These are the words of Pliny: "The *Myrobalanum* is common to the Troglodytes, the Thebais, and Arabia, which divides Judæa from Egypt (*i. e.* Stony Arabia): it grows for the purpose of producing ointment, as appears from its very name. And this also indicates that this tree (whose leaf is like the heliotrope, of which I shall speak amongst the plants) produces a nut. The fruit is of the size of an hazel-nut (*Avellanæmicis*). Of these the one which grows in Arabia is called the Syrian." The context, both before and after, clearly shews that the grammatical subject of the last clause is *Glans*.—*Tr.*

the river Jordan,⁶ and that the oil obtained from it was held in very high esteem.⁷

⁶ See Rosenmüller's *Bibl. Geogr.* Vol. II. Pt. I. p. 127, 130. (of which, see the Translation in the *Biblical Cabinet.*)

⁷ Celsius (P. II. p. 180) is of opinion, that **זָרַי** is the *Mastick shrub*, which is denoted by a similar Arabic name **ضرو**. But *Firusabadi* says in *Kamus* (p. 1908, Calcutta Edit.), that this word denotes the tree called *Camcam*, **كَمَكَم**, and its green berry, and not, as incorrectly asserted by *Dshauhari*, its resin. *Ibn Sina* observes (p. 277 of

the Arabic text, that **ضرو** is well known, that its gum is brought to Meccah; that it has the power of laudanum; that it is odorous, and much in request with the women of *Hhaleb*. *Camcam* (*καγκκαμον*) is, according to Dioscorides (B. I. cap. 23), the resin of an Arabic shrub resembling myrrh, which, in combination with styrax and myrrh, is used for fumigating clothes. Accordingly, neither *Dherw* nor *Camcam* is a medicine, and neither of them is a produce of Palestine. *J. D. Michaelis*, in his *Supplem.* p. 2144, sqq., *Warnekros* (in *Eichhorn's Repertor.* Vol. XV. p. 227), *Jahn* (*Archæol.* Vol. I. § 83), and others, declare that **זָרַי** is the *Opobalsamum*;

but this is more a perfume than a remedy for healing wounds; and it also is an Arabic produce. And its Hebrew name is *Basam* or *Bosam*, see above, p. 147 and 150, note 7. The Hebrew word

זָרַי, as appears from the Arabic root **ضري**, *Fluid*, or *liquid* in general, which equally applies to oil of every kind. As to the greatly varying interpretations of the ancient translators, see *Michaelis*, l. c.

SECTION SIXTH.

FLAX AND COTTON.

1. *Pishtah*,¹ *Flax*.²

FLAX we find first mentioned in the Bible in Exod. ix. 31, where it is related, that by the hail storm which took place before the emigration of the Hebrews from Egypt, the flax, amongst other plants, being then in blossom,³ was destroyed. Flax was, even in the earliest ages, one of the most important objects of agriculture and trade in Egypt,⁴ and is so still. It is amongst the principal produce of the province of *Fayum* and of the *Delta*. The climate and the soil so greatly favour its growth, that the plant there attains a size which it never reaches in Europe. Egyptian linen affords clothing, not only to the entire population of that country, but also to the inhabitants of the whole of northern Africa and a part of the interior, and to the entire Levant; it is even ex-

¹ פִּשְׁתָּהּ, and also פִּשְׁתָּהּ, Hos. ii. 7, 11.

² *Linum usitatissimum*, s. *sativum*, Celsius P. II. p. 283. The Greek Translators of Alexandria, almost in every passage, render the Hebrew word *λίνον*.

³ Gesenius has shewn, *Thesaur.* p. 261, that גִּבְעֵל does not, as many have supposed, denote the *bud* but the *flower-cup*.

⁴ Celsius, l. c. p. 285, sqq.

ported to Italy and France.⁵ Amongst the calamities that were to befall Egypt, the prophet Isaiah xix. 9, also mentions, that the linen-weavers⁶ should be distressed on account of the failing crop of the flax. That flax was cultivated in Palestine as early as the time when the Hebrews conquered the country, appears from the circumstance mentioned in Josh. ii. 6, that Joshua's spies were concealed by Rachab on the roof of her house, below some stalks of flax.* And Prov. xxxi. 13, a careful housewife is

⁵ Hasselquist's Journey, p. 500. Olivier's *Voyage*, T. III. p. 297. Cfr. Sonnini, Vol. II. p. 21. Paul Lucas, *Voyages*, P. II. p. 47, also says, that in the province of *Fayum*, both the greatest quantity of flax, and also the most excellent quality, is cultivated and manufactured. In Silv. de Sacy's Notes, accompanying his French translation of *Abdoltatif's* Memorabilia of Egypt, p. 149, we find an account of the treatment and preparation of flax, extracted from Ebn Awvam's work on Agriculture. As to the cultivation of this plant in Egypt, see Girard's Observations in the Description de l'Egypte, T. XVII. (etat moderne,) p. 98.

⁶ עֲבָרֵי פִשְׁתִּים.

* The expression פִּשְׁתֵּי הָעֵץ, literally denotes, *flax of the wood*. The Alexandrian translates *λινοκαλάμη*. Gesenius translates the Hebrew expression by *Baumflachs* (*Tree-flax*,) i. e. cotton, (Manual-Diction. p. 697, third edit.) observing that the names of linen and cotton were frequently exchanged, the one for the other. But here no good reason appears for deviating from the ordinary signification of the word פִּשְׁתִּים.

The flax stalks were spread on the flat roof in open air, in order to roast them in the sun, which, in subsequent times, was

commended for occupying herself with flax. The official garments of Hebrew as well as of Egyptian priests,⁷ were made of linen, in Hebrew *Bad*.⁸ See Exod. xxviii. 42; xxxix. 28. Levit. vi. 3. 2 Sam. vi. 14. and Ezechiel requires, that in the future new temple, the plan of which he describes, the priests shall enter the inner vestibule dressed in linen garments,⁹ Ezek. xliv. 17. Moreover, we find mentioned linen girdles, (Jerem. xiii. 1.) lines, (Ezek. xl. 3,) and cords, (Judges xv. 13, 14.) Coarse linen, woven of raw flax,¹⁰ served as clothing for poor people, Sir. xl. 4. *Tow*, in Hebrew *Neoreth*,¹¹ is mentioned in Judges xvi. 9. Isa. i. 31, as a substance easily kindled by fire.

2. *Shesh*, and also *Buz*,¹ *Cotton*.²

The Hebrew word *Shesh*, which occurs thirty

done in ovens. Joseph. Antiquities, B. V. cap. 1, § 2, says expressly, λίνου γὰρ ἀγκαλίδας ἐπὶ τοῦ τέγους ἐψυχε. (γ)

⁷ בַּד.

⁸ Celsius, l. c. p. 289.

⁹ בְּגָדֵי פֶשֶׁתִּים.

¹⁰ Ὠμόλινον.

¹¹ נְעֵרֶת.

¹ בֹּזַן, שֵׁשׁ.

² *Gossypium herbaceum*, s. Celsius, P. II. p. 259, 169.

(γ) Dr. Rosenmüller's translation, which, in this instance, coincides with the English bible, would require a Hebrew text, the very reverse of what we find in the Hebrew bible, otherwise it could scarcely be right. Instead of *Pishtah* in the status constructus of the pl. n., we would have had *Ez* in the status constr. pl. with the defin. art. *ha* joined to *Pishtah*; the text would have been *Aze ha pisttah*: עֵזִי הַפֶּשֶׁתָּה,

then indeed, we could have translated *woods or trees of the flax*, and understood by that expression *flax stalks*; but, considering the actual state of the text, it is impossible not to give preference to Dr. Gesenius' translation.—*Tr.*

times in the two first books of the Pentateuch,³ is in these places as well as in Prov. xxxi. 22, by the Greek Alexandrian Translators interpreted *Bysus*, which denotes Egyptian cotton, and also the cotton* cloth made from it.⁴ In the later writings of the Old Test., as, for example, in the Chronicles, the

³ The passages are quoted in Celsius, p. 259.

* This is the Arabic word ^سقطن, also ^دقطن, and ^دقطن.

كتان.

⁴ See J. Reinh. Forster's *Liber singularis de bysso antiquorum*, Lond. 1776, 8vo. He is of opinion, (p. 47, sqq.) that the Hebrew ^ששֵׁנִי is contracted from the Egyptian *Shenes*, a compound word, of *She*, a tree, and *Es*, which (only according to his conjecture however,) denotes the fruit of the cotton shrub, and an epenthetic *n*, expressive of the status constructus or genitive case. It is certain, that in the modern-Egyptian or Coptic version of the Pentateuch, which is made from the Greek version, the Greek word βύσσος is always rendered *Shensh* in the Coptic. P. E. Jablonsky, (*Opuscula*, T. I. p. 290,) and his editor *Te Water*, consider it as certain, that ^ששֵׁנִי is derived from this Egyptian word. *Gesenius*, however, (*Hebr. Germ. Manual-Dict.* p. 873,) derives the Hebrew name from ^ששֵׁנִי, *to be white*, at the same time admitting, that the Hebrews may have borrowed it from the Egyptian language, without losing sight of the Hebrew etymology. The Arabs, according to Niebuhr, (*Descr. of Arabia*, p. 62,) call *Sash* that large fine piece of muslin which they wrap around their head-gear. And Prosper Alpinus (*De Plantis Aegypti*, p. 38,) says, that in Arabia, a stuff called *Sassa* is made of cotton. These names are, in all probability, not essentially different from *Shesh* or *Shensh*.

book of Esther and Ezechiel,⁵ *buz*⁶ is commonly used instead of *shesh*, as an expression for cotton cloth.

The shrub from whose fruit cotton is obtained, grows in many parts of Egypt and of Palestine. It is planted like cabbage or potatoes, each plant a foot or two distant from the next; it must be planted in autumn, when the rainy season begins. During that season, and as long as the plant is young, it resembles our buck wheat, having a beautiful red stem and a green leaf. In May it blossoms, having a yellow flower, which produces a green nut attaining the size of a walnut, in which the cotton is contained. In the summer months, the capsule gradually opens, and the cotton makes its appearance. In August and September it is gathered. The shrub reaches the height of about three feet, and spreads in branches. The stem attains about a finger's thickness, and becomes as hard as wood in the hot season. The seed is frequently found in the cotton which is brought to us. When it is cut asunder, an oily kernel, as in hemp-seep,⁷ is found in it. The prophet Ezechiel

⁵ Celsius, l. c. p. 169.

⁶ J. E. Faber, (Remarks on the East, Vol. II. p. 383,) considers it as certain, that *Buz* is the very same word as *Byssus*.

But *Celsius* and *Gesenius* derive it from בַּיִז, בַּיִז.

(instead of בֵּיִז) to be white. This latter opinion is supported by the circumstance, that the word לָבָן, לָבָן, which denotes *fine white linen or cotton cloth*, (Esth. i. 6; viii. 15,) also is derived from לָבָן to be white.

⁷ Korte's Travels, p. 576. Cfr. Prosper Alpinus de Plan-

xxvii. 16, mentions cotton (*buz*) amongst the productions of Syria, which were brought to the markets of Tyre. Pausanias states, that cotton is produced in Judea.⁸ Among the descendants of *Judah*, a family which established a cotton manufactory⁹ is mentioned, 1 Chron. iv. 21.

The circumstance that Joseph, when raised to the dignity of a Grand Vizier, Gen. xli. 42, was honoured with a cotton dress by Pharaoh, shews that cotton stuffs were among the Egyptians considered as most costly. *Pliny*¹⁰ also says, that the official robes of the Egyptian priests were made of byssus, and of cotton cloth. In the description of the rich man in the parable, Luke xvi. 19, it is stated, that he daily

tes Aegypti, p. 18. Cotwyk's *Itiner.* p. 93. Pococke's *Descr. of the East*, Vol. II. p. 83. *Mariti* (on the Cultivation of the Cotton shrub in the Isle of Cyprus,) *Travels*, p. 142. Olivier's *Voyage*, T. III. p. 298; T. IV. p. 138. The *Wool-tree* (*Gossypium arborescens*,) which is yet cultivated in Egypt, is different from the cotton shrub. As to the *Gossypium arborescens*, see Girard in the *Description de l'Egypte*, T. XVII. p. 104. Cfr. Voss on Virgil's *Georgics*, Lib. II. v. 120. Faber conjectures, that stuffs made of the wool of the *wool-tree* are called שֵׁשׁ, but those made of the wool of the cotton shrub, בוץ, and this conjecture he finds on the circumstance, that in Ezech. xxvii. 7, שֵׁשׁ is mentioned as an Egyptian production, but, in v. 16 of the same chapter, בוץ as a Syrian article.

⁸ Eliac. Posterior. towards the end.

⁹ בֵּית-עֲבֹת־הַבֵּץ.

¹⁰ *Hist. Nat. Lib. XIX. cap. 1.*

arrayed himself in *byssus*. The clothes made of this material were *white*,¹¹ this appears from Revel. xix. 8, 14, where it is said of the inhabitants of heaven, that they were arrayed in pure white byssus garments. The reason no doubt was, that *white* is the colour of innocence.

*Carpas*¹² is also considered as the name of a fine cotton or linen stuff; it is mentioned, Esth. i. 6, in the description of the tapestries, with which the inner court of the royal palace of Susa was hung. The Hebrew word will recal to the recollection of every one the *Carbasus*¹³ of the Greek and Roman authors, which occurs very frequently with them, and by which is denoted a kind of fine flax, and also the stuff made of it, which, according to Pliny,¹⁴ was first invented in Spain. The name, however, the Greeks doubtless received from the East. For, in the Sanscrit, *Karpasam* denotes a linen

¹¹ However, as Pausanias l. c. states that the byssus produced in Elis is, in respect of its fine quality, not at all inferior to the Hebrew, and that it only is LESS YELLOW. Voss (l. c.) believes that the rich man in the parable strutted in a gorgeous yellow array of the Hebrew byssus, and in purple, as the two most magnificent colours known in ancient times. But cotton stuffs may have been bleached white by the Hebrews, as linen is with us.

¹² כַּרְפָּס. Celsius Hierobot. P. II. p. 157. Gesenius' Manual-Dict. p. 399, 3d edition.

¹³ *Κάρπασος*.

¹⁴ Hist. Nat. XIX. cap. 1, § 2, 3. Et Hispania citerior habet splendorem lini praecipuum . . . Et tenuitas mira, ibi primum carbasis repertis.

cloth,¹⁵ from which the Persic *Kirbas* and *Korfis*¹⁶ are derived. Now, appropriate and suitable as the signification *fine cotton* or *linen cloth* is in itself, for the above mentioned passage of the book of Esther, the circumstance, that the word *carpas* is placed between two other words, which undoubtedly denote colours, viz. the *white* and the *purple blue*,¹⁷ is adverse to the reception of such a signification. The intermediate *carpas*, accordingly, most probably also denotes a colour. An Arabic word, consisting of the same consonants as the Hebrew, but of which the vowels only are differently placed, and which is pronounced *caraphs*,¹⁸ denotes *garden parsley*.¹⁹ It is therefore probable that the Hebrew word alludes to the *green* colour of this plant.²⁰ This conjecture is sup-

¹⁵ See the Glossary in Paulinus a S. Bartholomæo Vyacarana, p. 212.

¹⁶ کرفس، کرباس.

¹⁷ The Hebrew words are חוּר כַּרְפֵּס וְתִכְלֵת. (*Chur Carpas uthecheleth.*) The first and third of these words also occur in juxtaposition, viii. 15, where it is stated, that *Mordechai* went out from the presence of the king in royal array, תִּכְלֵת וְחוּר, (*te cheleth vachur,*) *purple-blue and white.*

¹⁸ کرفس.

¹⁹ *Apium Petroselinum.* Cfr. Ibn. Sina, p. 195 of the Arabic text.

²⁰ כַּרְפֵּס, is stated in *J. J. Rambach's Notis uberiorib. in liber. Esther ex recens. J. H. Michaelis (in the Uberiorr.*

ported by the Chaldee paraphrase, where *carpas* is interpreted *leek-green*.²¹

Annotatt. in Hagiograph. T. II. p. 1057,) to be: velum ex lino factum, viridis, ut videtur, coloris. Arabes *petroselinum*, quod summe viride est, *Carfs* vocant. Thus *J. D. Faber* in his posthumous MS. on Biblical Botany, also explains it.

²¹ כֶּרְתָּנִין. *Cherathnin*.

SECTION SEVENTH.

MARSH PLANTS.

1. *Agmon*,¹ *Reed, Rush*; Germ. *Schilfrohr, Binse*.²

FROM the Hebrew word *Agam*,³ which, like the corresponding Arabic,⁴ denotes a *pool*, or *stagnant water*, and also a *pond*, is derived *Agmon*, the name of a plant growing in such waters, which is equivalent to the English *reed or rush*. Although, systematically speaking, these two plants belong to different families,⁵ it is not at all improbable, that, on account of their resemblance to each other, they were comprehended under the common appellation of *Agmon*. The passages of the Old Test., in which the Hebrew word occurs, are reconcileable to both of them. The prophet Isaiah says, ix. 13:(δ) “ *Therefore Jehovah will cut off from Israel head and tail, palm-branch and Agmon, in one day.*” Here, in the second figure, which is taken from the vegetable

¹ אַגְמוֹן.

² *Arundo vulgaris. s. palustris; scirpus palustris.* Celsius, P. I. p. 465, seqq.

³ אָגָם.

⁴ $\begin{matrix} \text{S} - \text{E} \\ \text{ا} \text{ج} \text{م} \end{matrix}$.

⁵ The rush belongs to the family of *Cyperaccæ*, Reed-grasses, but the reed to the family of *Gramineæ*. See Perleb's *Comp. of Nat. Hist.* B. I. p. 302 and 306.

(δ) Ver. 13 in the Hebrew, but 14 in the English Bible.—*Tr.*

kingdom, and by which persons of high and low rank are typically expressed, the *reed* and the *rush*, both-being low marsh plants, may with equal propriety be contrasted with the lofty palm-branch. We have the same case in chap. xix. 15, “ *No work will be accomplished by Egypt, neither by head nor tail, neither by palm-branch nor Agmon, i. e. by reed or rush.* Isa. lviii. 5. Jehovah says: “ *Is that a fast to my liking: a day in which a man afflicts his soul, hanging his head down like reed or rush?*” The top, and the upper part of the one of the plants, as well as of the other, is always bent down on account of the length and weakness of the culm on which it is placed. In Job xl. 21 (others 26), (ε) where the crocodile is described, we read: “ *Canst thou put Agmon into his nose?*” As the impossibility of taming the crocodile is spoken of in the preceding passage, the Hebrew word here denotes a plaited cord of rushes or reeds.⁶ (ζ) In the sequel of this description of the crocodile, xl. 11,

(ε) The former of these quotations (Job xl. 21) is from the Septuagint, and the latter (xl. 26) from the Hebrew text. In the English version there is again another division, and there the words alluded to are to be found in Job xli. 2. In other respects the English version of this passage greatly differs both from the Septuagint, and also from Dr. Rosenmüller’s interpretation.—*Tr.*

⁶ *Sonnini* (Travels, Vol. I. p. 423, and Vol. II. p. 416) says, that the reed is frequently used in Egypt for making cords.


(ζ) “ *Canst thou put a reed into his nose.*” I rather think these words imply no more than this: Canst thou play with him, or irritate him for joke’s sake. Cfr. Ver. 5, (Engl. vers.) “ *Wilt thou play with him as with a bird.*”—*Tr.*

(others 12), (7) it is stated, that “ *Out of his nostrils a vapour issues, like the vapour of a seething pot and Agmon.*” Here the greatest number of interpreters are of opinion, that the Hebrew word denotes a *boiling cauldron*.⁷ *Agmon* may here, however, denote a pond, in which reeds and rushes grow, and out of

(7) In the Engl. version, xli. 20. A comparison between Buffon’s description of the Crocodile, and Job xli. 7, 13, 14, 15, 16, 17, 18 (Engl. version), seems greatly to support Dr. Rosenmüller’s interpretation, as to the identity of the Leviathan and the Crocodile, nay almost to place it beyond a doubt. Buffon says :

“ The skin is defended by a suit of armour, which a musket-ball cannot penetrate. The crocodile has no lips ; so that, when either walking or swimming with the utmost tranquillity, the teeth are bare, and the aspect seems animated by rage. Another circumstance that contributes to increase the terrific appearance of its countenance, is the fiery glare of its eyes ; and these, being situated near each other, have also a malignant aspect. The armour with which the crocodile is clad may be accounted among the most elaborate pieces of nature’s mechanism. On the lower parts it is much thinner, and more pliable than on the upper. The whole animal appears as if covered with the most regular and curious carved work. The mouth is of immense width,” &c. This agrees well with the description in Job, even according to the English version :

“ Canst thou fill his skin with barbed irons ? or his head with fish-spears ? Who can discover the face of his garment ? Who can open the doors of his face ? His teeth are terrible round about. His scales are his pride, shut up together as with a close seal ; one is so near to another, that no air can come between them : they are joined one to another : they stick together, that they cannot be sundered,” &c.—*Tr.*

⁷ From the signification, *to be hot, to be boiling*, which the root  has in the Arabic language.

which a dense mist and vapour arises.⁸ Such ponds are expressed by the word *Agammim*,⁹ ex. gr. Isa. xxxv. 7; xlii. 15, which is derived from the same root as *Agmon*. And in Jerem. li. 32, the reeds or rushes of such ponds having been burnt down by hostile armies, are called *Agammim*.

From these observations, it appears that *Agmon* may denote *reeds* as well as *rushes*, and that Celsius excludes the latter without any good reason. It is even more probable, that since the Hebrew language has a peculiar word (*Kaneh*) for *reeds* in general, *Agmon* is the word which properly denotes *rushes*.

2. *Kaneh*,¹ *Reed*,² or *Cane*.

The reed, as is well known, is a shrub plant, out of whose knotty root, many long hollow stems are put forth, which by knots are divided into several limbs. The leaves are sharp-edged and cutting; instead of blossoms, there appear outspread ears of the form of ostrich feathers. It grows in humid marshy places, in ponds, and on the banks of rivers, ex. gr. on the banks of the Nile, Exod. ii. 3. 1 Kings xiv. 15. Isa. xix. 6; xxxv. 7. Job viii. 11. Several travellers have observed, that the banks of the Jor-

⁸ Thus *Aben-Ezra*, in the passage of *Job* here quoted, explains אגם נאשר יתחמם האיר by אגמון, a pond when the air is heated, and from which, of course, a vapour rises.

⁹ אגמים.

¹ קנה.

² *Arundo*, *canna*, Celsius, P. II. p. 312.

dan are covered with various species of reed.³ Because reed, on account of the length and weakness of its culm, is shaken to and fro by the slightest blast; *it is used as an image of a fickle unsteady man*, Matth. xi. 7. Luke vii. 24.(9) In 1 Kings xiv. 15,

³ Ex. gr. Belon *Observations*, Livre II. ch. 86.

(9) This, no doubt, is a very common, and very ancient interpretation of the words, *κάλαμον ὑπὸ ἀνέμου σαλευόμενον* yet a more attentive examination of the context will at once shew its untenableness. Why should the Saviour suppose a suspicion of the Baptist's inconstancy and fickleness to have arisen in any mind? This was the very suspicion by which, of all others, the Baptist was least likely to be assailed. All external circumstances, and his whole mode of life, bespoke a man, whom not even foolishness nor malice could accuse of fickleness. The Saviour, too, in ver. 18, states the existing prejudice against John; and this prejudice does not in any manner allude to fickleness. Moreover, the Saviour in proposing the question, "*A reed shaken by the wind?*" does not subjoin to it any negative answer as he does to the subsequent questions; which plainly indicates, that, however superficial may be the opinion expressed by the words, "*a reed shaken by the wind,*" he does not consider it as utterly false or absurd. I quite agree with Schleusner, who says: "Non audiendi sunt, qui in utroque loco (*i. e.* Matth. xi. 7, and Luke vii. 24), arundinem symbolum hominis inconstantis, levis et fide dubii esse arbitrantur." Still I cannot either adopt Schleusner's interpretation. The context of this sententious and enthymematical speech clearly shews, that the Saviour here proposes an opinion which might be expected to be common, an obvious and natural opinion; but, at the same time, one far from being satisfactory or exhaustive. *The weather-beaten reed*, no doubt, is a type of the *weather-beaten anchorite*, leading a life of abstinence and seclusion. The meaning which is latent in the passage accordingly is: *What did you go out to see in the wilderness? A reed shaken in the wind, i. e. a mere weather-beaten anchorite*

it is an emblem of a tottering kingdom, shaken to its very foundations. A man bent down by misfortune and sorrow, is, in Isa. xlii. 3, figuratively called a *broken reed*. The Roman soldiers, who, in scorn and derision, called the Saviour "*King of the Jews*," gave him, according to Matth. xxvii. 29, instead of a sceptre, a reed into his right hand, in order to indicate that his sovereignty was as frail and futile as a reed.

A species of a strong and tall reed⁴ was used as a stick, for support both in standing and walking. But if such a stick broke, the point or the splinter of the broken reed wounded the hand leaning on it for support. Therefore, the Assyrian General Rabshakeh, 2 Kings xviii. 21. Isa. xxxvi. 6, sent this message to the King *Hezekiah* [*correctly, Chizkiah*]: "*Behold thou didst rely on that broken reed, Egypt, on which if a man lean, it will go into his hand, and pierce it.* The same figure, and also of Egypt, is used by the prophet Ezechiel, xxix. 6. He thus ad-

or recluse? And since the Saviour does not confute this opinion, his silence amounts to this: *A recluse no doubt he is; but he who has seen no more in John the Baptist than the recluse, is far from having rightly estimated his character.* A solitary reed in the desert, battered by the winds, utterly neglected and disregarded, and yet subsisting, is a suitable emblem of an hermit, and of the many hardships and privations which he must suffer. This is not the place for interpreting the subsequent parts of the Saviour's speech respecting John the Baptist; but it would be easy to shew, that the subsequent members of it far better agree with this interpretation than with any other hitherto proposed.—*Tr.*

⁴ *Arundo Donax*, Broad-leaved reed. Celsius, P. II. p. 317.

dresses the Egyptian nation : “ *Because thou wast a staff of reed to the house of Israel, when they took thee in their hand, thou didst break, and entirely pierce their shoulder ; and when they leaned on thee, thou brakest, and didst pass through both their loins. Therefore saith the Lord,*” &c. The splinter of a broken reed inflicts a painful wound. In one of Theokrit’s Idyls, a maiden complains of pain in her finger, caused by a hurt received from a broken reed.⁵ And Theodoretus mentions this also as one of the tortures which the primitive Christians had to suffer :⁶ that broken and pointed sticks of reed were driven in under the nails of their hands and feet, and into other parts of their body.

From Ezech. xl. 3, sqq. and Revel. xi. 1 ; xxi. 15, 16, it appears that the Hebrews used the reed as a measuring-rod for buildings. The length of such a measuring-rod was six ells, Ezech. xl. 5 ; and this is said to be the natural length of the strong broad-leaved reed.⁷

A certain species of reed has, from the earliest ages to the present time, been, with the Eastern nations, a substitute for our writing quills. And thus we read in the conclusion of the third epistle of St. John (ver. 13) : “ *I had much to write, but I would not write to thee with ink and reed.*”⁸ The reed,⁹ which

⁵ Idyl. VIII. 24.

Ἔστι καὶ τὸν δάκτυλον ἀλγῶν

τοῦτον, ἐπεὶ κάλαμός με διασχισθεῖς διέτμαζεν.

⁶ Hist. Eccl. B. V. p. 39.

⁷ Celsius, l. c. p. 321.

⁸ Διὰ μέλανος καὶ καλάμου.

⁹ In Arabic كَلَمٌ, Kalam.

is used for this purpose, grows in the marshes between the Euphrates and the Tigris, near Hellah, in the Babylonian Irak. When the reed has attained ripeness, and has been cut off, it is laid down in the marshes, in order to be softened, and this gives to it a dark yellow or brownish colour. When they are dried and prepared, these reeds retain a certain degree of hardness, which renders them fit for being used for writing pens. Although they are thicker than our writing quills, they become less thick when they are cut. For, as the interior marrow is then taken out, only a kind of thin bark remains, which, however, is sufficiently strong for writing.¹⁰

3. *Keneh Bosem*,¹ and also *Kaneh Hattob*,²
Calamus,³ (*Sweet-flag*.)

The common *Calamus* is a plant, with a very long leafy peduncle, frequently growing near ditches and rivers in every part of Europe. The whole plant, but particularly the root, contains an aroma, on account of which the latter is well known as a heating,

¹⁰ Tavernier's *Voyages*, T. I. p. 396. Cfr. *Genz* in *Sadis*, Rosar. p. 595. Herbin's *Développemens des principes de la langue Arabe moderne*, p. 226.

¹ קִנְיָה בְּשֵׁם, literally *Reed of Fragrance*. Exod. xxx. 23.

² קִנְיָה חֲטֹב, i. e. *Good or Fragrant Reed*. Jerem. vi. 20.

³ *Acorus verus*, *Calamus aromaticus officinarum Asiaticus*, radice tenuiore. *Celsius*, P. II. p. 355, sqq.

strengthening, and digestive medicine. These properties are to be found in the Oriental calamus in a still higher degree. The best, which, according to Pliny,⁴ grows in Arabia, spreads its scent to a great distance, and is soft to the touch. It is still better when it does not easily break, and when it is more splintery and fibrous in the fracture than a radish. In the middle of the hollow reed there is a web, which is called the flower. The more there is of it, the better is the quality of the plant. The shorter, thicker, and tougher in the fracture it is, the better it is considered to be. Ezechiel, in xxvii. 19, mentions the calamus, too, amongst the goods imported from Arabia to Tyre. From the knotty root of this reed an oil was obtained, which, according to the precept of Exod. xxx. 23, was to be an ingredient in the holy oil of ointment. It may be inferred from Isa. xliii. 24, that the pulverized root was employed in the perfume, which was destined for divine service, for in that passage Jehovah thus addresses the Jewish nation: "*Thou hast not bought with money any calamus for me; thou hast not refreshed me with the fat of thy sacrifices.*" And Jer. vi. 20, "*For what purpose is the incense of Theba brought to me? and the calamus of a distant country?*" The calamus is, however, not mentioned amongst the ingredients prescribed in Exod. xxx. 34, from which the perfume for the Temple was to be prepared.

⁴ Hist. Nat. Lib. XII. cap. 22.

4. *Gome*,¹ *The Papyrus Plant*.²

From the words in Job viii. 11, “*Can Gome grow anywhere but in a marsh?*” it appears that the word *gome* denotes a marsh-plant. And in Isa. xxxv. 7, *gome* is mentioned along with *kaneh*, a reed, as a plant growing in humid places.³ The plant is still more precisely characterized by the circumstance, that, according to Exod. ii. 3, and Isa. xviii. 2, river boats were made of it in Egypt. This applies only to the papyrus shrub, from which small boats were plaited, which were used on the river Nile. Moses was exposed, Exod. ii. 3, amongst the flags of the Nile, in such a plaited and pitched papyrus case.⁴ “The Papyrus reed,” Pliny says,⁵ “grows in Egypt in marshy places, or in the stagnant pools, remaining after the inundation of the Nile, where the water is not more than two ells deep; its oblique root is of about an arm’s thickness; the plant is triangular; its height does not exceed ten cubits, and it tapers towards the top, terminating above with a tassel, or flower capsula, which can be used for no other purpose, than for making of it gar-

¹ גֹּמֶה.

² Papyrus. Celsius, P. II. p. 137, sqq.

³ From גֹּמֶה, to sip, גֹּמֶה denotes a plant, sucking or absorbing water. Thus *Lucan*, Pharsal. IV. 136, gives to the Papyrus shrub the epithet *bibula*.

⁴ תַּבַּת גֹּמֶה.

⁵ Hist. Nat. L. XIII. cap. 11, § 22.

lands for the statues of the gods.⁶(1) The inhabitants use the root instead of wood ; not only as fuel, but also for making vessels of it. *From the plant itself they weave boats* ; but from the bark they make sails, roof-shingles, clothes, mattresses, and also ropes. They chew it raw, and also boiled, and merely swallow the juice of it.”⁷ Theophrastus also asserts, that

⁶ Bruce (Travels, Vol. V. p. 26, Volkmann’s Translation) says, “ that the triangular culm of the papyrus has a vivid green colour ; that it is stout below, but tapers at the top. The lower part of the culm is about two feet high, surrounded with long, hollow, lanceolate leaves, covering each other like scales, and rendering more firm the lower part of the plant. Their colour is dark-brown or yellow. The upper part, or the top consists of many small grass-like stalks (filaments), one foot in length. About the middle each of these stalks subdivides itself into four, and from this point of division is put forth the same number of leaves. The top somewhat resembles an ear of wheat, but it is in reality a soft tender chaffy husk. The flowers grow alternately on the culm, not opposite to each other, nor below on the culm.” The best botanical description of the papyrus plant is to be found in Christ. Fridr. Rottböhl’s *Descript. novar. plantar. Lib. I. Hafn. 1773, fol. p. 32, sqq.* In Egypt this plant is, according

to Bruce, (p. 27) called ^سبردي, *Berde.* Golius, *Lexic Arab.* p. 252.

(1) Although this appears to be a more correct description of the plant, it is not Pliny’s text, for he says : “ *Thyrsi modo cacumen includens semine nullo, aut usu ejus alio, quam floris ad Deos coronandos,*” *i. e.* it closes its top like a Bacchus-wand, having no seed, and being of no use, excepting the flower, which may be used for crowning the gods.—*Tr.*

⁷ “ The root was chewed like liquorice, because much sweet juice was contained in it. Of this we are informed by Dios-

the Nile wherries were made of papyrus.⁸ But they were, as Achilles Tattius⁹ observes, so small, that they could carry only one person, and those who used such a conveyance, when they came into shallow water, took the wherry on their back, and carried it further. Plutarch says,¹⁰ that Isis circumnavigated the marshes in a papyrus wherry, for the purpose of collecting the pieces of Osiris's body. From Heliodorus's account,¹¹ it appears that the Ethiopians made use of similar boats; for he relates that the Ethiopians passed in reed-wherries over the Astaboras; and he adds, that these wherries were swift-sailing, being made of a light material, and not capable of carrying more than two or three men. According to *Bruce*,¹² the only kind of boats that is found in Abyssinia, and which they call *Tancoa*, is, even in modern times, made in the following manner: the keel is made of acacia-wood, and the papyrus plants, being first sewed together, are fastened to it, gathered up before and behind, and the ends of the plants thus tied together. These observations

corides. The sugar-cane is also chewed. In Abyssinia, they still are in the habit of chewing the root of the maize, as well as also the roots of every species of *Cyperus*." *Bruce*, l. c. p. 19.

⁸ Hist. Plantar. Lib. IV. cap. 9. *Αὐτὸς δὲ ὁ πάπυρος πρὸς πλεῖστα χρήσιμος. Καὶ γὰρ πλοῖα ποιοῦσιν ἐξ αὐτοῦ.*

⁹ Lib. IV. p. 248. Cfr. Celsius, l. c. p. 147.

¹⁰ De Iside et Osiride, p. 358.

¹¹ Aethiopica, Lib. X. p. 460, Bourdalou's Edit.

¹² L. c. p. 18. Cfr. Ludolf's Hist. Aethiop. Lib. I. cap. 8. No. 112. *Solum lacum Tzanicum, quem et mare Dembeae vocant, monoxylis lintribus, ex typha praecrassa confertis, magno suo periculo navigant.*

illustrate the passage in Isaiah viii. 2, where Ethiopia is spoken of as a country, *which sends its messengers in reed-vessels*¹³ *across the water.*

Job complains, ix. 26, that his days pass away like *Ebeh-ships*.¹⁴ Several interpreters believe that these denote the very swift reed-boats above described; because an Arabic word,¹⁵ resembling the Hebrew, signifies *reed*. But as the material from which these wherries were made is called *gome* in two other passages, Exod. ii. 3, and Isa. xviii. 2, it appears improbable, that, in the passage of Job, another word should be used. Moreover, the expression *Oniyoth*,¹⁶ which signifies larger ships, would scarcely have been applied to these diminutive wherries. For these reasons, we agree with those, who interpret *Oniyoth-Ebeh*, pirate-ships;¹⁷ for these also commonly are swift sailing, and this interpretation harmonizes with the figure of an eagle darting upon its prey, which is used in the second member of the verse.

5. *Achu*,¹ *Sedge*.²

Job asks, viii. 11: “*Can Achu grow without water?*” Immediately before he says: “*Can the pa-*

¹³ בְּכֵלֵי - גִּמְאָ

¹⁴ אֲנִיּוֹת אֵבֶה

¹⁵ ^{ḡ-ḡ} أباة .

¹⁶ אֲנִיּוֹת

¹⁷ Literally: *Ships of hostility*. For more than forty MSS. read אֵיבֶה (instead of אֲבֶה), which probably is to be pronounced אֵיבֶה.

¹ אַחַו

² Carex. Celsius, P. I. p. 340, sqq.

pyrus-reed grow anywhere but in a marsh?" The seven fat cows, which, in Pharaoh's dream, foreboded as many fertile years, according to Gen. xli. 2, 18, came up out of the Nile, and fed in the *Achu*. From these passages, it appears that this word denotes a species of grass growing in humid and marshy places, which is further confirmed by St. Jerome's statement, who says that learned men have given him certain information, that, in the Egyptian language, every green herb growing in marshes is called *Achi*.³ The word is still actually found retaining this signification in the Coptic language, in which remnants of the ancient Egyptian tongue are preserved.⁴

6. *Suph*,¹ *Seaweed*, (*Seatangle?*) Germ. *Seegras*, *Meertang*.²

The Arabic Gulf, which the Hebrews called the *Suph-Sea*,³ is, in the Coptic version of the Pentateuch

³ In the Commentary on Isa. xix. 7. For here the Greek translator of Alexandria has explained the Hebrew words,

עֲרוֹת עַל-יַאֲזַר by τὸ ἄχι τὸ χλωρὸν πᾶν το κύκλω τοῦ ποταμοῦ. Now, St. Jerome thus interprets the word ἄχι: Quum

ab eruditis quaererem, quid hic sermo significaret, audivi, ab Aegyptiis hoc nomine lingua eorum omne quod in palude virens nascitur, appellari. In Sirach xl. 16, the Egyptian word ἄχι has been retained.

⁴ See Jablonsky's Opuscula, P. I. p. 45. P. II. p. 160.

¹ סופ. ² Φῦκος, Alga. Celsius, P. II. p. 64.

³ יַאֲזַר - סוּף. Rosenmüller's Bibl. Geogr. Vol. III. p.

and the Psalms (Exod. x. 19 ; xiii. 18 ; xv. 4. Ps. cvi. 7, 9, 22), called by its old Egyptian name the *Shari-sea*. But *Shari*, or as the Greeks pronounced it, *Sari*, is the Egyptian name for tangles or seaweeds,⁴ of which there is such an abundance on the coasts of the Arabic Gulf, that, according to the statement of Diodorus Siculus and Agatharchides, it gives a green colour to the water, and the waves cast such a quantity up on the coast, that heaps mountain-high are accumulated of it.⁵ *Shaw* observes,⁶ that probably no place exhibits so great an abundance of sea vegetation as the haven of Tor, on the west coast of the Arabic Gulf. "As we," he thus continues, "rowed along in smooth water, we observed such a variety of madrepores, fucuses, and other sea vegetation, that we could only consider it, as Pliny once did, as a submarine forest. The branched madrepores in particular justified the comparison ; for we passed over the tops of some of the height of eight or ten feet, being of a pyramidal form like a cypress ; some had open and expanded boughs like oaks, not to mention many others, which, like creeping plants, were spread over the bottom of the sea." These observations, at the same time, illustrate the words of the prophet Jonah, ii. 6, "*Sea-weed was wrapped around my head.*"⁷

⁴ Jablonsky's Opuscula, P. I. p. 266, and P. II. p. 164, sqq. Cfr. J. D. Michaelis' Supplemm. p. 1726.

⁵ See the quotations in Bochart's Geogr. S. P. I. L. IV. cap. 29, p. 320.

⁶ Travels, p. 384, Germ. Transl.

⁷ סוף חבוש לראשי. *Suph chabush leroshi*. The

In Exod. ii. 3, 5, it is mentioned that the mother of Moses put the papyrus box, in which he was exposed in the *suph*, on the banks of the Nile. And Isaiah xix. 6, says, that reed and *suph* withers on the banks of that river. In these passages, no doubt, that species of *sari* is denoted by *suph*, which, according to Pliny, grows on the banks of the Nile, being a shrub about two ells in height, of a thumb's thickness, whose leaves resemble the papyrus, and which likewise is chewed after the same manner.⁸

beauty and force of these Hebrew words is obvious to every one who is at all acquainted with Hebrew diction. They at the same time clearly shew, that the prayer of the prophet Jonah must be connected with a history, different from that with which it is now associated, since these words would (even poetically) be inapplicable to the situation of a man inclosed in the belly of a sea-monster. The prayer is appropriate only for a man in a drowning condition, who has already, once at least, sunk to the bottom of the sea. The quotation, Jonah ii. 6, is right according to the Hebrew Bible; in the English version these words are found in ver. 5.—*Tr.*

⁸ Hist. Nat. Lib. XIII. cap. 23. Fruticosi est generis *Sari*, circa Nilum nascens, duorum ferme cubitorum altitudine, pollicari crassitudine; coma papyri, similique manditur modo. Cfr. Theoph. Hist. Plant. Lib. IV. cap. 9.

SECTION EIGHTH.

THORNS AND THISTLES.

1. *Koz*,¹ *Thorns*.²

THE Hebrew word probably is the common name, generally applicable to thorny plants, both great and small. When we read, Gen. iii. 18, that in future, the earth shall bring forth for man, *Koz* and *Dardar*; ³ this expression undoubtedly, is equivalent to the English *Thorns and Thistles*. The same expression is used Hos. x. 8, *Koz* and *Dardar*, i. e. *Thorns* and *Thistles* grow on the dilapidated altars of the idols. It is also used of weeds in corn-fields, Exod. xxii. 6. *If fire break out and catch the thorns, (Kozim,) and burn the corn heaps.* Isa. xxxii. 13,

¹ קוֹז. Jewish philologists derive this name from קוֹז, which denotes, *to be disgusted, to feel indignation*, because the sting of a thorn is disagreeable. Gesenius' conjecture, that the word is derived from קוֹז, corresponding in its signification with קִצַּץ *to cut*, and consequently also to *sting, wound*; is more probable.

² Spina, sentis, vepres. Celsius, P. II. p. 223. The Greek Translators of Alexandria, put everywhere ἀκανθαι and ἀκανθα for קוֹז.

³ קוֹז וְדַרְדָּר תִּצְמִיחַ לָךְ.

In the land of my people thorns grow. Jerem. iv. 3, *Break up your fallow ground, and sow not among thorns.*⁴ In Judges viii. 7, 16, thorns are mentioned as plants growing in deserts. Thorns cut up were, according to Isa. xxxiii. 12, used as fuel.⁵

2. *Atad*,¹ *Buckthorn*, Germ. *Stechdorn*.²

The Arabic word³ which, in sound is similar to the Hebrew, denotes a species of that thorn-bush which the Arabs call *Ausadsh* or *Usedsh*.⁴ This shrub,

⁴ *Ononis spinosa*, says Hasselquist, p. 561, spinosissima illa et pernicioosa planta, campos integros tegit Aegypti et Palaestinae. Non dubitandum, quin hanc indicaverint in aliquo loco scriptores sacri. Pensitent philologi, quaenam Scripturae spina sit, quae in Aegypto Arabice hodie dicitur *Akol*. An illa, quam in maledictione terrae nominat Moses? cum carduis maximis, in Aegypti incultis, promiscue et copiosissime crescit.

⁵ *Jarchi* on Ezech. ii. 6, observes, that in the Old Test. there are twenty vocables denoting thorny plants. But among these there are many of which it is at least doubtful, whether they denote thorns, e. g. שָׁבִים, שְׁבִים, סָרְבִים,

בְּרִקְנִים. Hasselquist says, moreover, l. c.: Ex plurimis illis spinarum speciebus, quarum in sacris libris fit mentio, minima pars cognoscitur, et quaenam fuerint plantae definiri potest.

¹ אָטָד.

² *Rhamus spinis oblongis.* Celsius, P. I. p. 199.

³ ^{س-ع}
اُطد.

⁴ -و-

⁵ عوسج, according to *Ibn Beitar*, in *Golius Lexic. Arab.*

Prosper Alpinus⁵ says, has an abundance of branches, which attain the height of three ells and upwards, on which are found many long and very acute thorns, partly covered with small florets. The leaves of this shrub resemble the leaves of the olive, but are whiter and narrower. The flowers are small and white, and resemble in form and size those of the Oriental hyacinth. The fruit is a small, black, bitter berry. Belon⁶ and Rauwolf⁷ found this thorn-bush very common in Palestine, particularly in the neighbourhood of Jerusalem. The former observes, that it is used for hedges and inclosures. In the fable of Jotham, Judges ix. 8, sqq. this thorn-bush is, in ver. 14, 15, the emblem of a tyrant. From Ps. lviii. 10, it appears that it was used for fuel. There we read of the destruction of the unrighteous, and the op-

p. 120. In the *Kamus*, (p. 340, Calcutta edit.) اظد^{-ع}

is explained by عیدان العوسج^{-و-و-و} the wood of the shrub *El-*

atad. The Carthaginians too, whose language, the Punic, was closely related to the Hebrew, called the *buckthorn Atadin*, according to the Supplements to Dioscorides: 'Ράμνος. Ἀφροὶ Ἀταδίν.

⁵ De plantis Aegypti, p. 21, along with an engraving.

⁶ Observations, Liv. II. ch. 78.

⁷ Travels, B. III. chap. 3, "Of thorns by the Arabs called *Al-hausegi*, but by the Greeks and *Latins*, *Rhamnus*, there are three kinds, of which the first is the right kind, which is also common in France and in *Italia*, and which is also found in great abundance, not only about the city of Jerusalem, but also in that city; it shoots early in the spring, and while still young, it puts forth long slender crooked switches, on which there are a great many long, strong, and acute thorns."

pressors of the people as follows : “ *Before your pots feel the fire, fresh as well as burning, they are taken away.*”⁸

The place on the other side of Jordan, where the sons of Jacob, conveying their father’s dead body to Palestine, commenced the solemn funeral lamentation, is, Gen. L. 10, 11, called the *thrashing-floor*, or *the place of Atad*, probably because buckthorn-bushes were growing there. Thus, the *Sherif Edrisi*⁹ in his description of the city of Medina, mentions, that to the east of it there is a buckthorn field,¹⁰ which was used for a cemetery.¹¹

It has been conjectured,¹² that the crown of thorns with which Jesus in his passion was crowned by the Roman soldiers, (Matth. xxvii. 29,) was plaited from the branches or twigs of the rhamnus. But, as the Evangelist makes use of that Greek word which denotes thorns generally,¹³ and as there exist so many species of thorny plants in Palestine, all conjectures

⁸ Relative to this passage, cfr. Oedmann’s Collections, Pt. IV. p. 99, note.

⁹ In his Arabic Geographical work, commonly called *Geographia Nubiensis*, (See Rosenm. Bibl. Geogr. Vol. I. p. 44,) p. 53, or 46 of the Latin version.

¹⁰ بقيع الغرقد. In the map of the city, furnished by Burckhardt, (Travels in Arabia, p. 320,) it is marked No. 17, and there it is called *el-Bekya*.

¹¹ Sic a rhamnorum multitudine nomen accepit *Rhamnus*, pagus Atticae; a *spinis*, *Acanthus*, oppidum Thraciae, Cretae, et Aegypti; a *rubis*, *Rubi*, oppidum Campaniae. Simonis Onomastic. V. T. p. 98.

¹² Ex. gr. *Rauwolf*, l. c.

¹³ Ἀκανθῆαι.

on this subject must remain uncertain, and they can never lead to any satisfactory result.¹⁴

3. *Dardar*,¹ *Thistles*.²

The Hebrew word, which, in the passages, Gen. iii. 18. Hos. x. 8, quoted above in No. 1, is combined with another Hebrew vocable denoting thorns, receives from the ancient Translators, the appellation *Tribolos*;³ this name denotes a plant with a prickly flower, by the Germans called *Burzeldorn*.⁴ (x)

4. *Chedek*,¹ a *Thornbush*, *Brier*.²

This Hebrew word occurs only twice in the Old

¹⁴ Hasselquist (Travels, p. 560, Germ. Transl.) believes, that *the thorn used by the soldiers* was that thorny plant growing in many parts of Palestine, which the Arabs call *Nabeke*. "It was," he says, "very suitable for their purpose, as it has many sharp thorns, which inflict painful wounds; and its flexible, pliant, and round branches, might easily be plaited in the form of a crown. What still more strengthens my opinion, is, that the leaves of this plant much resemble the ivy, and, like it, have a rich dark green colour. Probably the soldiers, by way of scorn and derision, chose a plant resembling that with which their emperors and generals were usually crowned, in order thus more fully to express their mockery.

¹ דָּרְדָּר.

² *Tribulus veterum*, *Tribulus terrestris* Linn. Celsius, P. II. p. 128.

³ Τρίβωλος, *tribulus*.

⁴ *Fagonia Arabica*, longissimis aculeis armata.

(x) French, *Tribule*.—Tr.

¹ חֶדֶק.

² *Paliurus*.

Test.: First, Prov. xv. 19, The way of the slothful resembles a *Chedek-hedge*, which Symmachus translates, a hedge of thorns.³ And, in the second place, Mich. vii. 4, we read: *The best among them is as Chedek, and the most righteous like a hedge.*⁴ From both passages it appears, that the Hebrew word denotes a species of thorn shrubs which were used for enclosures or hedges. But this characteristic is much too general to determine from it with any precision, what particular species of thorny plants is denoted by the Hebrew word.⁵

³ "Ὅσπερ φραγμὸς ἐξ ἀνάδης. The Alexandrian Translator, ὁδοὶ ἀεργῶν ἐστρωμέναι ἀνάδαις, *the ways of the slothful are strewed with thorns.*

⁴ *Sicut paliurus*, says the old Latin version. J. H. Voss observes on Virgil's Ecl. V. 39, that the paliurus of the ancients was a prickly shrubby plant, used for quick hedges, having deciduous leaves, and above the leaves, in a kind of husk, three or four oily seeds, like the linen seeds. The southern *buckthorn*, which still, with the Greeks, bears the corrupted name *paliru*, (*Rhamnus Paliurus* Linn.) possesses these characteristics. The Greek Alexandrian Translator probably read a different word in his MS. See Bochart's Hieroz. P. II. L. IV. cap. 25, T. III. p. 618. Leipz. edit.

⁵ Because the Arabic word ^{5 - -} *حَدَق* *Chadak*, which entirely corresponds with the Hebrew, denotes the *love-apple* (*Melongenæ*), whose stem and leaves are prickly. Celsius (P. II. p. 43, sqq.) gives the same signification to the Hebrew word. But the plant, whose fruit is the love-apple (a species of small melon,) is of the family of night-shades (*Solanææ*), and not at all suitable for making a hedge.

5. *Choach*,¹ a *Thorny Shrub*.²

The prophet Isaiah xxxiv. 13, mentions *Choach* among other thorny plants, springing up in desert places, and in Hos. ix. 6, this vocable is found in a similar context. In the Prov. xxvi. 9, it is said, that a wise saying in the mouth of a fool is like *choach* in the hand of a drunken man. And, in his Song, Solomon says, ii. 2, that his beloved is among the daughters of Jerusalem like a lily amongst *chochim*. In these four places, the Alexandrian translators put for the Hebrew, that Greek word which denotes thorny plants generally.³ The Alexandrian translator uses a similar Greek word,⁴ 2 Kings xvi. 9, where we read, that the *choach* of *Lebanon* sent to the *cedar of Lebanon*, saying, Give thy daughter to my son to wife, but a wild beast trod down the *choach*. Job xxxi. 39, 40, makes use of this protestation; that, if he ever had oppressed the poor, *choach* might grow in his field instead of wheat, and weed instead of barley. Here the Greek translator puts *nettles*⁵ for the Hebrew word. But the *thornbush* is here as suitable as in the other passages quoted. A precise determination is here as impossible as it was in the word *chedek*, which was the subject of the preceding number.⁶

¹ חֹחַ,

² *Prunus sylvestris*, Celsius P. I. p. 477.

³ Ἀκανθαι.

⁴ Ἀκαν.

⁵ Κνίδη.

⁶ Celsius, l. c. believes that חֹחַ denotes the *sloe* or *black-*

In Job xl. 21, (according to others 26,) (λ) the word choach does not denote the plant, but a hook or a ring, which it was usual to put through the nose

thorn (*Prunus sylvestris*), like the Arabic ^وخوخ, which the Arabic translator puts for the Hebrew word, 2 Kings xiv. 9.

But ^وخوخ signifies *Peach*, being equivalent to ^ودراق ^ودراق, which, by Golius, p. 770, is, according to *Giggeius* and *Meidani*, called *malum Persicum*; and he adds, ita et a vulgo Orientis majoris generis seu cereum prunum vocatur. Firusabadi merely says, (in the *Kamus*, p. 320, Calcutta edit.)

that ^وخوخة, Collectiv. ^وخوخ is the name of a known fruit, ^وثمرة صعروفة.

(λ) Here is some confusion; It seems that Dr. Rosenmüller has been thinking of the former part of the verse, ^ובַּחֹךְ ^והַתְּשִׁים אֶגְמוֹן בְּאִפּוֹ; instead of the latter, ^ותִּקַּב לְחִיו; for certainly Job does not speak of boring through the ^אפ, the nose, of the crocodile with a choach; but his ^לחִי, his jaw, or his jaw-bone; it would also be difficult to establish, that it was customary to bore through *with hooks or rings*, the nose of large fish when caught, for what purpose could that serve? It is much more probable that Job, alluding to the manner in which *smaller* fish is usually caught with hooks, when he says, “or bore his jaw through with a choach,” means no more than this, Canst thou catch him like a small fish, with a common fishing hook? Every body who has caught fish on a hook in the deep, knows that the hook commonly pierces the jaw. The passage which is quoted, according to the Hebrew Bible and the Septuagint, is chap. xli. ver. 2, in the English Bible, see above sect. 7th, No.

of large fish when caught. Something analogous is to be understood, 2 Chron. xxxiii. 11, where it is stated, that the Jewish king Manasseh was, by the Assyrians, caught with *chochim*, i. e. *fetters*, and brought in chains to Babylon.

Once, in the reign of Saul, the Israelites having been brought into great jeopardy by a mighty host of Philistines marching against them; they concealed themselves, according to 1 Sam. xiii. 6, in caves, in *chavachim*,⁷ in rocks, in towers, and in pits. Here many interpreters are of opinion, that *chavachim* means *thorn-bushes* or *thickets*. But, had such been meant, the expression would have been *chochim*. Here the Hebrew word surely denotes concealed places, *hiding places* in general.⁸

I. Translator's note. It seems probable, that before the invention of iron, primitive hooks were made of the hard thorns of some trees which were bent into a proper shape; such would be in no degree inferior to the *Pa*, made of tortoise-shell and mother of pearl, used by the Tonga Islanders. See Dr. Martin's Dictionary of the Tonga language, sub voce *Pa* in Vol. II. of his "Account of the Tonga Islands." If the signification of *hook*, of the word *choach*, were founded on more passages than Job xl. 26, one would be tempted to conjecture, that *choach* was even etymologically connected with the English word *hook*; the variation in the elements of these words, is no other than what naturally follows from the genius, i. e. the physical laws of these languages.—*Tr.*

⁷ בְּחֹחִים.

⁸ The Arabic خَوْخَةٌ amongst other things, denotes interstitium inter duas domos januâ non clausum, and the verb خَاخَ in the fourth conjugation, signifies *delituit*. The Greek

6. *Charul*,¹ a Thorny Plant.²

In the Proverbs xxiv. 30, 31, the following words are written: “*I went by the field of the slothful, and by the vineyard of the man void of understanding; and, lo! it was all grown over with nettles, and charullim covered its surface.*” Job, in xxx. 7, portrays a rude mob or people, who lead a miserable life in the wilderness, by saying, that they howl among the bushes, and gather themselves together under *charul*. And the prophet Zephaniah threatens, ii. 9, that the land of the Moabites and of the Ammonites shall become overgrown with *charul*. The Greek translator of Alexandria, in the first and last of these three places, (the only places in which the Hebrew word occurs,) entirely deviates from our present Hebrew text; but, in the passage of Job, he translates *charul* by *wild shrubs*.³ The languages which are cognate with the Hebrew, have not this word. From the above quoted passage of the Proverbs, it may with probability be inferred, that *charul* denotes some thistle or thorn, which, like the nettle, is a productive

Translator of Alexandria has interpreted בְּחֹתִים *in tais mánthais*, by which he, no doubt, has meant *caves* which were used as stables.

¹ חָרוֹל.

² Celsius, P. II. p. 163. *Rhamnus floribus trigynis, aculeis geminatis, altero inferiore reflexo, Paliurus.*

³ Φρύγανα ἄγρια.

weed in neglected fields ; and from Job xxx. 7, that it is a shrub of such a size, as to afford a resting-place beneath its shade.

7. *Naazuz*,¹ *A Hedge of Thorns*.²

When the prophet Isaiah threatens Judea with being inundated, and laid waste by hostile armies from Egypt and Assyria, he, in chap. vii. and verses 18 and 19, thus expresses himself ; he says, that Jehovah shall allure the flies from the extremest parts of the rivers of Egypt, and the bees from the land of Assur, and that they should come and rest in the desolate valleys, and in the crevices of the rocks, and in all *Naazuzim*, and in all pastures. Here some interpreters have believed, that the Hebrew word, *crevices* or *fissures*.³ But from the other passage (Isa. lv. 13), in which the Hebrew word occurs, it appears that it denotes a plant ; for there we read, instead of *Naazuz*, fir-trees shall grow. These words indicate, that *Naazuz* denotes a mean and insignificant shrub. An Arabic word,⁴ which in its elements somewhat resembles the Hebrew, is the name of a thorny-tree or shrub, whose bark is used as a denti-

¹ נֶאָזוּזִים.

² Celsius, P. II. p. 189.


³ *Quasi loca perforata*, from the Chaldee נֶאָזוּזִים *infigere*, hence the Chaldee נֶאָזוּזִים, *a hole*, a pit. Thus the Greek translator of Alexandria : καὶ ἐπὶ πᾶσαν ῥαγάδα.


⁴ نَعْضُ, *Nodh*.

fice, and also for tanning.⁵ The signification of the root: *to stick into, to fix*, which has been preserved in the Chaldee, leads to the inference, that the Hebrew word generally denotes a prickly shrub, or a hedge of thorns.⁶

8. *Sirim*,¹ *Thorns*.²

Amongst other thorns and thistles which were to grow in the ruined palaces of the foes of the Jewish nation *Sirim* are also mentioned, Isa. xxxiv. 13. In Hos. ii. 6, Jehovah threatens the Israelites to block up their way with *sirim*, that they may find no passage. *Nahum*, i. 10, compares the foes of the Hebrew people with closely entangled *sirim*, which shall be snatched away like dry stubble. In Eccles. vii. 6, *sirim* crackling under pots are mentioned. The Greek translator of Alexandria puts Greek names of thorny or prickly plants for the Hebrew word,³ and such

⁵ The passage from the *Kamus*, Gesenius has quoted in his Commentary on Isaiah, p. 317. The prickly lotus shrub is similar: it is in Arabic called , and this is the word which Saadias has put in both places for the Hebrew.

⁶ Sprengel (*History of Botany*, Vol. I. p. 12) conjectures, that  is the *Zizyphus vulgaris*, which grows in many parts of Palestine, and which the Germans call *Judendorn* (*Jews' thorn*).

¹ סִרִּים.

² Spinae, vepres. Celsius, P. II. p. 211.

³ Viz. Isa. xxxiv. 13, and Eccles. vii. 6, by ἄκανθα, Hos.

also agree with the context in the passages where *sirim* occurs. Nothing can be determined more precisely as to the meaning of this word.⁴

9. *Sillon*,¹ a *Thorn*.²

The promise that the Hebrew people shall once be liberated from all their foes, who at that time vexed and oppressed them, is by the prophet Ezechiel xxviii. 24, thus figuratively expressed: “*Then there shall be no more any sillon for Israel, to wound it, nor any thorn (koz) to give it pain.*” Even the combination of the word *sillon* with another, which undoubtedly signifies *thorns* (see above, No. 1.), lead to the probable inference, that the former denotes an analogous object. The Arabic word *solal*,³ which in its radical consonants corresponds with the Hebrew, denotes *the thorn of the date-tree*, and the Chaldee word *silleta*,⁴ corresponding with the Hebrew, signifies a *thorn*. The Greek translator of Alexandria has ac-

ii. 6, by *σκόλοπις*, Nah. i. 10, *χερσωθήσονται*, *they shall become wild*.

⁴ In Amos iv. 2, the feminine form of the plural, סִירוֹת, is not the name of a plant, but there the word denotes *hooks*, such as were used for bringing away prisoners.

¹ סִלוֹן.

² *Aculeus, Spina, Celsius, P. II. p. 220.*

³ سَلَال, spinae, vel aculei adnascentes palmarum ramis. Golius Lex. Arab. p. 1195.

⁴ סִלְתָּא. See Buxtorf's Lexic. Chald. p. 1482.

cordingly rightly interpreted *sillon*, by a *thorn* or *chip*.⁵

Jehovah says to the prophet Ezechiel ii. 6, that *refractory* people and *sallonim*⁶ are against him, and that he dwells amongst scorpions. Here several interpreters are of opinion, that the Hebrew word *sallonim* is in signification not different from the above mentioned *sillon*; ⁷ and that, accordingly, refractory persons, and those who endeavour to hurt and injure others are here figuratively designated by thorns or prickles. But the vowel difference (*a* instead of *i*) seems to indicate a difference of signification. Since the root also has the sense of *scorning*, *despising*, it is not unlikely that those who scornfully reject the exhortations of the prophet are here designated by an emblem harmonizing with the preceding word, which denotes refractory persons.⁸

⁵ Σκόλοψ.

⁶ סִלּוֹנִים.

⁷ For סִלֵּל may be equivalent to סִלָּה, of which the Aphel form in the Chaldee versions is used for the Hebrew verbs, נִאָץ and מֵאָס, *ex. gr.* Prov. v. 12.

⁸ סִרְבִּים. Some authors, indeed, have been of opinion, that this word signifies nettles, but no satisfactory reason can be given for that opinion; *cfr.* Bochart's Hieroz. P. II. L. IV. cap. 14. T. III. p. 425, note. Leipz. Edit. None of the ancient translators has thought of plants at all in this passage.

10. *Seneh*,¹ a *Thornbush*.²

As Moses one day, in the wilderness at the foot of Mount Horeb, which is a part of Mount Sinai, was tending the flock of sheep belonging to his father-in-law, he saw, as is related Exod. iii. 2, 3, 4, a burning bush, which, however, was not consumed by the fire. The most ancient Greek translator interprets the Hebrew word *Seneh* by a Greek word, which denotes a *thornbush*, and more particularly a *bramble*.³ The monks of St. Catharine's Monastery on Mount Sinai accordingly pretended, that the bramble which Moses saw stood near the chapel of the burning-bush, which joins the great church of the monastery on the west side; and they have planted in a garden near the chapel a bramble, like those which are frequently found in Europe, averring that, at such a bush, the wonderful phenomenon related in Exod. iii. 2, 3, 4, had occurred. But *Pococke* observes,⁴ that the bramble does not at all grow in these regions. He found, however,⁵ on the road which passes between the small pinnacles of Mount Horeb, (and which is full of small thickets and fragrant flowers, affording an excellent pasture for the cattle,) several *hawthorn bushes*,⁶ the like of

¹ סֵנֶה.

² *Rubus vulgaris*, Celsius, P. II. p. 58.

³ Βάτος, rubus fructu nigro, caule aculeato, foliis ternatis et quinatis.

⁴ Descr. of the East, Vol. I. p. 215.

⁵ L. c. p. 218.

⁶ *Oxyacantha Arabica*, fructu magno eduli. *Shaw* observes (T. II. p. 117, French Transl.), that this plant grows in

which he saw nowhere in the East, except in the neighbourhood of Antioch; and he adds, "that if the monks had not made it a bramble, it was much more likely that the holy bush was of the hawthorn species, and that this was the spot where the phenomenon was observed, being a sequestered place, and an excellent pasture, whereas in the neighbourhood of the chapel of the holy bush not a single herb grows." It is further to be observed, that, besides the above quoted passage of the Exodus, the Hebrew word *Seneh* occurs only in Deut. xxxiii. 16, where mention is made of the burning-bush, in which Jehovah manifested himself to Moses.⁷

11. *Sirpad*,¹ a Thorn or Thistle.²

The plant designated by the above Hebrew word, is, by Jewish scholars, reckoned amongst thorny plants, because, in the only passage where it occurs, Isa. lv. 13, it is found in combination with another shrub (*Naazuz*, see above, No. 7), probably belonging to this species of plants. None of the ancient translators, however, has considered the Hebrew

many places on St. Catharine's mountain, opposite to Mount Sinai, and that its fruit attains the size of a cherry, or a medlar.

⁷ *G. Verestoi* has made a fruitless display of learning in a treatise "De Palma Ardente," (in the *Sylloge Dissertatt. Philolog. Exegeticar.* Leyden, 1775, Vol. I. No. 1.) endeavouring to shew, that

סֵנֶה denotes the palm-tree. *Theod. Hasæus* has confuted this opinion in his *Sylloge Dissertatt.* No. 5.

¹ סֵרְפַד.

² *Celsius*, P. II. p. 218.

word as the name of a thorny plant. The Greek translator of Alexandria holds it to be *fleabane* or prince's-feather,³ which grows wild in Asia; but with us is cultivated in gardens as an ornamental plant. The ancient Latin translator puts *nettle*.⁴ Saadias interprets the Hebrew word by an Arabic, signifying a species of *pine*.⁵ The Syriac translator renders it *wild marjorum*.⁶ An Arabic word somewhat resembling the Hebrew, *Sharphat*,⁷ denotes a small shrub, having a milky sap, which, according to Sprengel's conjecture, is the *wolf's-milk*.⁸ The promise of the passage of Isaiah being, that in the wilderness cypresses shall grow instead of thorny hedges, and myrtles instead of *Sirpad*, J. J. Schmidt⁹ conjectures that the Hebrew word denotes the *Holly*,¹⁰ (μ) a shrub which is also indigenous in the groves of Italy and France. It is a low shrub, whose branches are tough striped rods, thickly studded, both winter and summer, with hard veined leaves,

³ *Κόνυζα*, *Polygonum orientale*.

⁴ *Urtica*.

⁵ *سوس*. See Ibn Sina, p. 179, l. 7 of the Arabic text.

⁶ *شرف*, *origanum*. See above, Sect. IV. No. 2, note 3.

⁷ *شرفت*, species arbusculae lactiferae. Golius Lex. Append. p. 2341.

⁸ *Euphorbia*. Hist. of Botany, Vol. I. p. 16.

⁹ *Biblischer Physicus*, i. e. *Natural Philosophy of the Bible*, p. 395.

¹⁰ *Ruscus*.

(μ) In German, *Myrthendorn*, or *Mäusedorn*, (literally *Myrtlethorn*, *Mousethorn*); French, *Housson*; *Ilex Aquifolium*.—*Tr.*

which on the end have a hard prickle, and strongly resemble myrtle leaves. This plant, however, grows in woods and mountains, but not in deserts or heaths, and consequently does not accord with the passage of Isaiah.¹¹ It seems most probable, that the Hebrew word denotes some insignificant and lightly esteemed heather.

12. *Zinnim, Zeninim,*¹ *Thorns.*²

In Prov. xxii. 5, we read, that in the way of the froward, or the false, there are *Zinnim* and *Snares*.³ The former of these words the Greek translator of Alexandria interprets by a Greek word, which denotes both *thorns* and *foot-traps*.⁴ Both are, in the

¹¹ Ewald Crit. Grammat. p. 520, conjectures that the quadriliterum סָרְפָר is, as to signification, not different from the trilaterum סָרְפָ, which denotes *white-mustard*. And Gesenius observes (Manual Dict. p. 588, 3d Edit.), that this plant in Sicily covers uninhabited places like *heather*. But it is not known to be indigenous in Oriental deserts.

¹ זִנְיִם, זִנְיִם. ² Celsius, P. II. p. 214.

³ זִנְיִם פְּהִים בְּרֶךְ עֵקֶשׁ.

⁴ Τρίβωλοι. With the Romans, too, *Tribuli* signified *foot-traps*. (v) which also were called *murices*; in whatsoever way they lay, they always presented one or more prominent *goads*: in war they were used against the cavalry. See Vegetius Instit. Rei milit. Lib. III. cap. 24.

(v) And hence, no doubt, the English word *tribulation*; for undoubtedly it was the greatest tribulation to fall in with these mischievous enemies.—*Tr.*

sentence here quoted, equally appropriate, as emblems of malicious designs, effecting the hurt and ruin of others.⁵ At the same time, the sense of foot-traps seems here preferable, as an object cunningly laid in the way is alluded to.

Job says in v. 5, that the hungry consumes the harvest of the fool, and takes even out of *thorns*, *i. e.* out of the most impenetrable enclosure.⁶

The Israelites are threatened, Num. xxxiii. 55, that if, in conquering Canaan, they should not entirely drive out all the inhabitants, those who remained should become thorns in their eyes, and *zeninim* in their sides; and similarly, although the order is inverted, in Jos. xxiii. 13, that they should become *scourges* in their sides, and *zeninim* in their eyes. In both places, the most ancient Greek trans-

⁵ The Hebrew word, in its most proper sense, seems to denote *goads* or *prickles* in general, and to be cognate with

שָׁבִיז, סְנִינִים.

⁶ וְאֵלֹהִים - מִצְנִימִים יִקָּחֶהוּ. The Alexandrian translator puts: αὐτοὶ δὲ ἐκ κακῶν οὐκ ἐξαιρέθήσονται. *They shall not be delivered from misfortunes.* He considered *thorns* as a figurative expression for *evils*, *dangers*, and instead of אֵל, he אֱלֹהִים. Aquila, Symmachus, and the Chaldee translator read מִצְנִימִים, by which they understood *armed men*, who should lead away the *unrighteous man* as a captive. Cfr. Rosenmüller's Scholia on the passage.

lators have put *javelins*.⁷ *Saadias* has, in Num. xxxiii. 55, translated it⁸ *needles*.⁹

13. *Kimosh, Kimmashon*,¹ *The Common Nettle*.²

In two places quoted (No. 5), Isa. xxxiv. 13. Hos. ix. 6, this Hebrew word occurs in combination with *Choach*, and Prov. xxiv. 31 (No. 6), with *Charul*. Both these words, as has already been shewn, denote *thorny plants*. Rabbi *Tanchum*, on Hos. ix. 6, explains *Kimosh* by *common nettle*,³ which explanation perfectly agrees with the context in the passages here alluded to.⁴

⁷ Βολίδες.

⁸ The feminine form לָנֹת, Amos iv. 2, denotes a *hook* with which fish are caught, and accordingly is here in no way applicable.

⁹ كَمَسَال. Golius, p. 1149, مَسَالَة, Plur. مَسَال.

Arcus grossior, qua sarcinae et lora consuuntur.

¹ קִמּוֹשׁ, Isa. xxxiv. 13. קִימּוֹשׁ, Hos. ix. 6. קִמּוֹשׁוֹן, Prov. xxiv. 31.

² *Urtica urens*. Celsius, P. II. p. 206.

³ قَرِيص; in Pococke's Comment. on Hosea.

⁴ The root preserved in the Arabic, قَمَش, denotes to *snatch away together*, specially to *snatch up small objects* from the ground. The Hebrew vocable, therefore, seems originally to have denoted an insignificant plant in general,—a weed.

14, 15. *Shamir and Shaith*,¹ *Thorns and Thistles*.²

These two words are to be found in juxtaposition only in the prophecies of Isaiah, in the seven places following: v. 6; vii. 23, 24, 25; ix. 18; x. 17; xxvii. 4; and *Shamir* in one place, xxxii. 12, in combination with *Koz*, which is the general name for thorny plants (see No. 1). In all the passages here quoted, plants are designated, which spring up as weeds in desert places, and the ancient translators have expressed these words of the Hebrew text, by vocables denoting thorny plants or thistles. An Arabic word, *Samur*,³ which resembles the Hebrew *Shamir*, is, according to *Abulfadli*,⁴ the name of a prickly tree or shrub, which is a species of *lotus*.⁵

16. *Sikkim*,¹ *Thorns*.²

In the passage already quoted (No. 12), Num. xxxiii. 55, the most ancient Greek translator puts for the Hebrew word, one which denotes thorns, *prickles*, or *chips*.³ This translation accords well with

¹ שִׁית שְׁמִיר.

² Species Spinarum, Celsius, P. II. p. 187.

³ 

⁴ Celsius, l. c. p. 188.

⁵ More concerning the lotus. See Celsius, P. I. p. 21.

¹ שִׁבִּים.

² Spinæ; Celsius, P. I. p. 218.

⁵ Σκόλοπις.

the context in the passage where the word occurs ; and the circumstance, that a cognate Arabic word⁴ denotes *thorns* and *thistles*⁵ more fully establishes its accuracy.

⁵⁰
 4 شوك .

⁵ The feminine form **שִׁבּוֹת**, Job. xl. 26, (according to others 31,) [and in the Engl. Bible, xli. 7,] denotes *pointed weapons*, javelins, harpoons. Cfr. The Arabic ⁵⁰شوكه spina una, aculeus, spinosa arbor *arma eorumque acumen*, Golius, p. 1325.

Two vocables, by some Rabbins supposed to denote thorns, **בַּרְקָנִים**, *Barkanim*, and **עֲקֻרְבִּים**, *Akrabim*, are erroneously mentioned as such. For the former of these two words denotes a *flail* (the German word is Dreschschlitten), the latter *barbed scourges*. Cfr. Celsius, P. II. p. 194 and 216.

SECTION NINTH.

THE VINE.

THE ancient Hebrews seem to have considered the Vine, in Hebrew called *Gephen*,¹ as a tree, for, in Jotham's fable, Judges ix. 8, sqq. the trees elect the

¹ גִּפְנֵי הַיַּיִן, and in more precise language גִּפְנֵי הַיַּיִן, the stalk of wine, Num. vi. 4. Judg. xiii. 14, because the former word also applies to other similar plants. In Arabic, the vine is called دَالِيَّة. See Höst's Description of *Maroko* and *Fez*, p. 303, and *Burckhardt's Travels in Syria*, p. 77. In the Hebrew דְּלִיּוֹת denotes *vine-tendrils*, Ezech. xix. 11. But these are also called בְּדִים, *Baddim*, Ezech. xvii. 6; xix. 14, עֲנָפִים, *Anaphim*, Ps. lxxx. 11; עֲבוֹתִים, *Abothim*, Ezech. xix. 11, and קִצְרִים, *Kezirim*, Ps. lxxx. 12, which vocables are also used for boughs and branches of trees. In Gen. xl. 10, 13. Joel i. 7, שָׂרִיגִים, *Sarigim* also denotes *vine-tendrils*. זְמוֹרָה, *Zemorah* is a *grape cut off*, Num. xiii. 23. Isa. xvii. 10. אֶשְׁכּוֹל, *Eshchol* properly denotes the *Raceme*, (*Racemus*,) on which berries or flowers grow in the form of a cluster. Thus the word is used in Gen. xl. 10, of the *Raceme* with flowers and unripe berries, just as *racemus* is used by Virgil, (*Georg. II. 60*,) of unripe grapes. The Arabic

vine to be their king. This pompineous (ξ) shrub often attains, in the East, a considerable height and strength. Pliny says² that its grapes overgrow the

اٲكـال and اٲكـال^{ٲٲ} a branch of a date-tree bearing ripe dates, pretty much resembles the Hebrew word. Next,

אֲשֵׁנָה signifies the grape itself, (as in Isa. lxx. 8. Mich.

vii. 1,) whose appropriate name, however, is عِنَب, ^{ٲٲ}Enab.

סמדר Semadar, in the Song of Solomon ii. 13, 15,

denotes the flowers of the vine, which word, as Gesenius conjectures, (Diction. p. 581,) is contracted from סמם

Samam, to exhale fragrance, and הדר hadar, to decorate,

בֵּסֶר is used of the appearance of the date flowers. בֵּסֶר,

Beser, Job xv. 33, and בֹּסֶר Boser, Isa. xviii. 5, are unripe

sour grapes, (as בֵּסֶר unripe dates,) which also, Num. vi. 4,

are called חרצנים Charzanim. In the Arabic حصرم^(ٲ)

(by a metathesis of the ז and ר and a permutation of ז for ר) denotes unripe grapes. זג Zag, in Num. vi. 4, is the

externally transparent membrane of the vine-berries.

(ξ) It is not pretended that this should be considered as an English word in any other composition than one which is strictly technical.—Tr.

² Hist. Nat. Lib. XIV. cap. 1, § 3. Cfr. Virgil's Georg. II. 361.

(^ٲ) The Latin word *Racemus*, seems to be cognate with this Arabic word; it probably is formed from the latter by a metathesis.—Tr.

elm. In the 80th Psalm, where the Hebrew people, from the 9th verse, is represented by the figure of a vine, transplanted by God from Egypt to Palestine, there nursed by him and beautifully thriving, and spreading its grapes over the whole country, we read in the 11th verse: “ *Mountains are covered with its shadow, and the cedars of God, i. e. the highest cedars, with its grapes.*” The accuracy of this description appears from Gmelin’s³ account of the growth of the vine in the Persian province Ghilan: “ It is fond of forests, whether situate in low regions or on small hillocks. It is most frequently found about promontories, and their lower part is almost entirely covered with it. There, higher than the eye can reach, it winds itself about the loftiest trees, and its tendrils, which here have an arm’s thickness, so spread and mutually entangle themselves far and wide, that in places where it grows in the most luxuriant wildness, it is very difficult to find a passage.” In Iberia, where the vine grows wild, and where it is neither pruned, hoed, nor nursed, it commonly is, from time immemorial, interwoven with the branches of centennial oaks, beach-trees, and elders.⁴

Amongst the produce of Palestine, Deut. viii. 7, 8, *the vine* is also mentioned. The men whom Moses had sent off from *Kadesh Barnea*, for the purpose of exploring the land of which the Hebrews were about

³ Travels through Russia and Northern Persia, Vol. III. p. 431.

⁴ Reinegg’s Description of Caucasus, Vol. II. p. 47.

to take possession, as a proof of the fertility of the country, brought back to the camp of the Israelites, a cluster of grapes of an unusual size, which they had cut off in *Nachal-Eshkol*, i. e. *Grape-valley*, probably in the neighbourhood of Hebron. “*They cut off there,*” as we read in Num. xiii. 23, “*a vine branch with one bunch of grapes, and they carried it on a stick by two, i. e. two of them carried the bunch of grapes.* Several trust-worthy eye-witnesses assert, that there are found in Palestine, both vines and grapes of a size, which to us appears almost incredible. Steph. Schulz⁵ took his supper at *Beitshin*, a village not far from Ptolemais, under a vine, whose stem was about a foot and a half in diameter, its height was about thirty feet, and by its branches and branchlets, which had to be supported, it formed a hut upwards of thirty feet broad and long. The clusters of these extraordinary vines are so large, that they weigh ten or twelve pounds, and the berries may be compared with our small plums. When such a cluster is cut off, it is laid upon a board about an ell and a half broad, and three or four ells long, and several persons seat themselves about it, to eat off the berries. *Christoph. von Reitzschütz*⁶ avers, that he saw and ate of grapes in the mountains of Judea, which formed clusters half an ell in length, and whose berries were as long as two joints of a finger.* In other oriental regions, too, vines and

⁵ *Leitungen des Höchsten*, Vol. V. p. 285.

⁶ *Siebenjährige Weltbeschauung*, i. e. *Seven Years Seeing of the World*, p. 271.

* Mariti's account entirely agrees with this, for he states,

grapes are found of an extraordinary size. Strabo states,⁷ that in Morgiana, a country situate to the southwest of the Caspian, *i. e.* the modern Ghilan, (see above, p. 222,) there are vines to be found which two men can scarcely fathom round, and whose clusters were two ells in length. In the same country, Olearius⁸ found vines, whose stem had the thickness of a man's body. According to the same author's account,⁹ in Iran is found a species of grape, called *Enkuri Ali derasi*, of which a single cluster is half an ell in length, and its brown red berries as big as a Spanish plum.

Jacob, in his blessing, Gen. xlix. says of *Judah*, v. 11, “ *He shall bind his foal unto the vine, and his ass's colt unto the choice vine ; he shall wash his garment in wine, and his mantle in the blood of the grape.* This is a gorgeous description of the fertility and abundance of the district which was to be allotted to the tribe of Judah ! Besides Eshkol, which

(Tracts, p. 553,) that the grapes in the mountains of Judea are of such a size, that nothing similar is to be found in our part of the world. In other parts of Syria too, he says, that he has seen grapes of an extraordinary size, which a single person could certainly not carry far without losing some of them. From this it appears, that two of the spies carried between them on a stick the cluster which they had cut off, not only on account of its weight, but also in order to prevent its being squeezed, so that they might bring it entire to the camp of the Israelites.

⁷ Geogr. Book II. p. 73. Casaubon's edition, or p. 195, Tschucke's edition.

⁸ Persian Travels, Book VI. cap. 5, p. 369.

⁹ Book V. cap. 9, p. 304.

is mentioned above, the vineyards of Engedi, (which are alluded to in the Song of Solomon, i. 14, being situated to the southward of Jericho, near the Dead Sea), belonged to this district; and even in the middle of the eighteenth century, Hasselquist found vineyards there, cultivated by the Arabs, who sold the wine which they raised to the Christians.¹⁰ Hebron too, or *Habrūn*, situated six miles southward of *Bethlehem*, and where, in modern times, more wine has been produced than in any other part of Palestine, belonged to the tribe of Judah. But there, as Volney observes,¹¹ the vine is not cultivated for the purpose of making wine, as all the inhabitants are such zealous Musselmen that they will not tolerate any Christian among them; the grapes are dried, and raisins¹² of an inferior quality are made of them, although the wine itself is very good. When *Shaw* visited this country, an excellent raisin syrup was made from the indigenous grape, of which there were yearly exported, to Egypt alone, several hundred camel loads.¹³

The prophet Hosea (ch. xiv. 8,*) says, that the reformed people of Israel shall one day be esteemed like the choice wine of Lebanon. Several writers who

¹⁰ Travels in Palestine, p. 256.

¹¹ Travels, P. II. p. 241, of the German Translation.

¹² Hebrew צִמּוֹן, 1 Sam. xxv. 18. 2 Sam. xvi. 1, from

צִמּוֹן, to dry.

¹³ Travels, p. 293, Germ. Transl.

* English Bible, verse 7.

have tasted the wine of Lebanon aver that it is still the most excellent wine to be had in Syria. *Dandini* observes,¹⁴ that no support is given to the tendrils, but they are allowed to creep along the ground. The clusters are of an extraordinary size, and the grapes as large as plums. The wine which is made from them is excellent. The *Vino d'oro* of Lebanon, so called from its bright gold colour, imparts a pleasant warmth without being intoxicating, and its sweetness is extremely agreeable.¹⁵

The word *Sorek*¹⁶ denotes another species of vine, as appears from the context of the passages where it occurs. Jacob promises to his son Judah, (Gen. xlix. 11,) that he shall *bind his foal to the vine, and his ass's colt to the Sorek*. The prophet Isaiah, (ch. v. 1, sqq.) represents the care with which God nursed the Hebrew people, under the type of a vine-dresser, who, on a fertile hill planted *a branch of Sorek*. And in Jeremiah ii. 21, Jehovah says, that he had planted the Hebrew people like a *Sorek* of a genuine seed, but which had degenerated. Probably the Hebrew

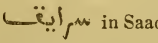


¹⁴ In Paulus' Collect., Vol. II. p. 214.

¹⁵ J. H. Mayr's *Schicksale eines Schweizer's, &c.*, i. e. Adventures of a Swiss, B. II. p. 228, 238; B. III. p. 63. De Bruyn also praises the wines of Lebanon. *Voyage au Levant*, p. 307. He says they are "les meilleurs vins et les plus delicats, qui se trouvent dans tout le reste du monde. Ils sont rouges, d'une tres belle couleure, et si onctueux, qu'ils attachent au verre." Comp. Arvieux, Vol. II. p. 326. Kosen. p. 466.

¹⁶ שֵׂרֶק.

word denotes that species of vine which is called *serik* or *sorik*,¹⁷ and which is cultivated, not only in Syria, but also in Arabia and the North of Africa, particularly in Morocco. The name *serki*, which, in that country, is given to a grape imported from the Levant, is, as to its consonantic elements, not different. Its grapes, according to Host's account,¹⁸ have no kernel, and are sweet, black, small, and almost round. Niebuhr found the same kind of grapes in Arabia and Persia,¹⁹ where he heard them called by the Persic appellation *Kish-mish*.²⁰ This grape, which is small and very sweet, seems indeed, as he observes, to be without a kernel, but, by a more attentive examination, he discovered that, instead of a hard kernel, it always has a soft seed, which in eating is not perceived, but may be distinctly seen if the berry is divided with a knife. Several travellers attest²¹ that these grapes, which are said to be without a kernel, are reckoned among the most precious kinds of fruit with which the table is furnished in the East.

It is related, in Gen. xl. 9, 10, that Pharaoh's chief

¹⁷  in Saadias . Abulwalid (in Gesenius' Comment. p. 231,) explains the Hebrew  by the former of these names.

¹⁸ Description of Morocco and Fez, p. 303.

¹⁹ Description of Arabia, p. 147.

²⁰ .

²¹ Their accounts may be found in *Oedmann's* Collectanea of Nat. Phil. P. VI. p. 98.

butler saw in a dream, a vine with three branches, which budded and blossomed, and put forth ripe grapes ; from which it appears, that from the earliest ages, the vine has been cultivated in Egypt. During their journey through the Arabian desert, the Hebrews, according to Num. xx. 5, reproached Moses and Aaron, with having brought them out from Egypt into that dry and barren land, where there were neither figs, nor vines, nor pomegranate trees, as in the former country. In Ps. lxxviii. 47, and cv. 33, it is stated, that by the hail storm with which Egypt was visited before the departure of the Hebrews, the vines also were destroyed. The Hebrew people are, in Ps. lxxx. 9, typically called a vine, transplanted from Egypt to Canaan. It is said that Osiris taught the Egyptians the cultivation of the vine, and that the first vines were planted near the Egyptian city of Plinthium.²² Although, in modern times, wine is not made in Egypt, the vines are, according to Sonnini's account,²³ greatly multiplied. They are commonly planted in the sand, where they grow very fast, and where the grapes which they produce acquire a delicious fragrance. They are, for the most part, of that species whose berries contain only one kernel. The same traveller found grapes in great abundance in *Kus*. The long clusters were full of large dark-

²² See Tibullus Lib. I. Eleg. 7. V. 29, sqq. Diodor. Sicul. Lib. VII. Cap. 73 ; Lib. IV. Cap. 2, 3. Celsius, (P. II. p. 412, sqq.,) has collected several testimonies from ancient authors, proving that the vine was cultivated in Egypt, a fact which many had considered as doubtful.

²³ Travels, B. I. p. 251, Germ. Transl.

red berries, of which the taste was sweet, and the odour delightfully fragrant.²⁴ Olivier states,²⁵ that the vine is cultivated on espaliers in almost every garden in Egypt, that it grows very fast, and attains a considerable height. In the neighbourhood of Rosetta, he saw vines planted in ditches dug in the sand, to the depth of two ells. Most of the grapes found in the markets of Cairo, are brought from Fayoum, where the cultivation of the vine is carried on upon a large scale.

In ancient times there were considerable vine plantations in the country of the Moabites, the modern province of *Karak* or *Kerek*, on the east bank of the Jordan.²⁶ Isaiah, prophesying of the devastation of Moab, says, (chap. xvi. 8, sqq.)

“ The fields of Heshbon mourn :

The rulers of the nations have broken the noble branches of
Sibmah's vine.

They had spread as far as Yæzer,

They ran wild through the desert :

Its tendrils spread,

They passed across the sea.

Therefore I, like Yæzer, bewail the vine of Sibmah :

I water thee, O Heshbon and Elealeh, with my tears.

For the war cry is heard in thy fruit and grape harvest,

Joy and mirth are taken away from the fruit-field :

There is no shouting nor glee in the vineyards.

No pressman treads out the wine in the presses :

No vintage song is heard any more.”

The culture of the vine in Moab seems to have spread

²⁴ Vol. II. p. 327.

²⁵ Voyage, T. III. p. 311.

²⁶ Rosenmüller's Bibl. Geography. Vol. III. p. 54, 59.

over the whole country. But the most famous vineyards, as appears from this passage, were at Heshbon on the Arnon, at Elealeh, at Sibmah, between Nebo and Baal-Maon, and at Yæzer, which was situated about eighteen miles from Heshbon. The sea, across which, as the poet says, the branches of Sibmah's grape passed, is the Dead Sea;²⁷ and the meaning is, that the vines of Moab would be transplanted towards the south and west, far into Arabia, and across the Dead Sea.

The same prophet, when threatening the land of Judah with devastation by hostile armies, says, (chap. vii. 23): "*Every place shall be, where there were a thousand vines at a thousand silverlings, it shall ever be for briars and thorns.*" It appears from this, that the value of a vineyard was then estimated according to the number of the vines, as Burckhardt²⁸ informs us, is still the case in the region of Lebanon, where a vine, if it be of good quality, is worth about a piaster. The same mode of reckoning obtains also in the vine-districts on the Rhine.

The period when "*every one sits (or dwells safely), under his vine and fig tree.*"—(1 Kings iv. 25. 2 Kings xviii. 31. Isa. xxxvi. 16. Mic. iv. 24), or, as Zechariah expresses it, (chap. iii. 10), *calls to, i. e.*

²⁷ In the repetition of this oracle, which we find in the Prophecies of Jeremiah, we read in chap. xlvi. 32, that the tendrils of Sibmah's grapes reached as far as the Sea or Lake of Yæzer. Here, probably, a large pool is meant, of which *Seetzen* found several in that district. Cfr. Rosenmüller's *Bibl. Geogr.* Vol. II. p. 190.

²⁸ *Travels in Syria.* Vol. I. p. 76.

invites *his neighbour under the vine and under the fig-tree*, denotes, by a beautiful figure of speech, a period of universal and secure repose.

“ *The vine of Sodom and Gomorrah, whose grapes are grapes of poisonous gall, and the clusters bitter,*” (Deut. xxxii. 32), is the emblem of a vicious and corrupted people. Some commentators understand by it a species of deadly night-shade,²⁹ a poisonous plant which abounds near the Dead Sea, and produces clusters of berries. Hasselquist³⁰ conjectures, that this may have given rise to the tradition respecting the *apples of Sodom*, which were said to have the appearance and colour of healthy fruit, but crumbled at the touch into dust and ashes;³¹ for the berries of the night-shade, when pricked by an insect, dry up and quickly pulverise.

²⁹ Solanum Melongenæ.

³⁰ Travels in Palestine, p. 560.

³¹ Josephus' Jewish War. IV. 8. 4.

SECTION TENTH.

TREES.

1. *Egoz*,¹ the *Walnut Tree*.²

The Hebrew word, which occurs only once, (Song of Solomon vi. 11), has been rendered, by the oldest Greek translator, “nut,”³ a version which is confirmed by the circumstance, that an Arabic term,⁴ having the same elementary letters, signifies the same thing. Properly speaking, it is a generic name for any fruit of a roundish form, inclosed in a hard shell; but as, in the above cited place, there is mention of a “garden of nuts,”⁵ we are, no doubt, to understand by that, a collection of *walnut-trees*.⁶ That these are indigenous to Palestine, as well as to Persia and

¹ אגוז.

² *Nux juglans*, s. *regia*. Celsius, P. I. p. 28.

³ Καρύα.

ס ו -

⁴ جوز. This word, as Abulfadli remarks, (in Celsius), is of Persic origin, كوز. The Arabic name for a *nut* is

س و د

خسف. [See Meninski Lexicon, 4068.]

⁵ אגוז גנת.

⁶ *Juglans*.

Arabia, admits of no question. Josephus⁷ boasts of the country around the lake of Genesareth, that, in consequence of its rich soil and temperate climate, shrubs and trees, which prefer a colder atmosphere, are found to thrive as well as those which flourish in warmer regions; and among the former he specifies the walnut-tree as being abundantly productive without any culture. Stephen Schulz, in speaking of the northern part of Palestine, between Ptolemais and Nazareth, (the same district to which Josephus refers,) says, that he often saw walnut trees so large that four and twenty persons might lie down under the shadow of the branches.

2. *Ahalim*,¹ the *Aloe-tree*, *Agallochum*.²

In the book of Proverbs, (ch. vii. 17), it is said that the harlot who is there described, had perfumed her couch "with myrrh, cinnamon, and *ahalim*." In the forty-fifth psalm, at the ninth verse, the garments of the queen, who is there celebrated, are said to have smelt of myrrh, *ahaloth*, and cassia; and, in the Song of Solomon, (chap. vi. 14), *ahaloth* is introduced along with spikenard, cinnamon, frankincense, and

⁷ Jewish War, III. 10. 8.

⁸ Leitungen des Höchsten. Part V. p. 189, 190, 197, 278, 191, 305.

¹ אֶהָלִים.

² *Agallochum praestantissimum*, arbor aloës. Celsius, P. I. p. 135.

other costly perfumes. The Chaldee translation of the Psalms and Canticles, the old Latin version of the Proverbs and Canticles, and the Syriac translator, have all rendered the Hebrew word by *aloes*. By this, however, we are not to understand the aloe plant of our gardens, but the odoriferous wood of a tree that grows in India, Siam, and Cochin China, and is called *Aghil*,³ a word which the Hebrews formed into *Ahel*, the Arabs into *Agalajün*,⁴ and the Greeks into *Agallochon*. The stem of this tree is of the thickness of a man's thigh. At the top grows a bunch of thick and indented leaves, which are broad below, but become gradually narrower towards the point, and are about four feet in length. The blossoms are red, intermixed with yellow, and double like a pink. From this blossom comes the pod, a red and white fruit about the size of a pea. The whole tree presents an appearance that is uncommonly beautiful; and the wood is so odoriferous that it is used for perfume. The Indians regard this tree as sacred, and never cut it down without various religious ceremonies. The people of the east suppose it to have been one of the indigenous trees of paradise, and hence the Dutch give it the name of the

³ Paulinus à S. Bartholomeo, in the Vocabulary to his Sanscrit Grammar, entitled *Vyacarana*, distinguishes three species of this tree, of which the best and most fragrant is called *Aghil*. From *Aghil* the Portuguese formed *Aquila*, (the eagle), whence the German name, *Adlerholz*, *q. d.* Eaglewood.

⁴ اغالوجي 'اغلاجون.

*Paradise Tree.*⁵ This imparts a peculiar beauty to the allusion of Balaam, (in Num. xxiv. 6), who compares the flourishing and happy condition of the Israelites to

“Ahalim* trees which Jehovah has planted,
And cedar trees beside the waters.”

Dioscorides says, that *Agallochum* was a spotted odoriferous wood,⁶ which was brought from India and

⁵ See *Rumphius*, Herbarium Amboniensis. Part II. Cap. 10, 11, p. 29, et seqq. There is a species of this tree that grows in the Moluccas, and is called *Garó*. Linnæus has described it as *Excoecaria Agallocha*, q. d. Blind Aloes, because the sap is said to produce blindness. See Wahl's East Indies, Part II. p. 772, and his remarks in the Fundgruben des Orients, Part V. p. 372.

* The most ancient Chaldee translator, Onkelos, has explained the Hebrew word by בִּיטְמִיָּא , i. e. Aromatic or Spice Plants. The modern Jews, as well as Jarchi and the Persian translator, understand by it *Sandal-wood*. In the oldest Greek version it is rendered $\sigma\kappa\eta\upsilon\alpha\acute{\iota}$, Tents, from which it would seem that instead of אֲהָלִים , Ahalim, they had read אֲהָלִים , Ohalim. [The Septuagint is in this followed by the Vulgate, the Syriac, and the Arabic.]

⁶ The wood is said first to give out its fragraney when it begins to putrefy. Pro agallocho quaerendo, says Kämpfer in the Amoenitatt. Exotic, p. 904, emissi mercenarii sylvas certo tempore subeunt, armis et securibus instructi, inventas arbores vetustissimas et caudices prostratos carie ac putredine foedos operose findunt, repertaque hinc inde fragmenta resinosa exi-

Arabia; by which, however, we are only to understand, that from India it was conveyed to Arabian harbours as an article of trade, and thence transported into Syria and Palestine. Kämpfer⁷ informs us, that in China and Japan, the wealthy spend large sums upon this wood, to be used in perfume at their entertainments. Among the Arabs it is a mark of honour paid to visitors, to sprinkle aromatic water on the beard, and then to perfume the apartment with aloe-wood, the smoke of which, adhering to the moistened hair, communicates to it its own fragrant odour.⁸

When the body of Jesus was taken down from the cross, Nicodemus, we are told, (John xix. 39), brought myrrh and aloes. This was not done, as many commentators suppose, with a view to embalm the body, but, as is expressly stated at ver. 40, it was to impart a fragrancy to the linen in which the corpse was wrapped up. We are not, therefore, to understand the passage as alluding to the bitter gum drawn from the aloe-plant of our gardens, (which is also employed in medicine), but as pointing to the costly and odorous aloe-wood which has now been described.⁹

munt; quorum primum, quod inveniunt, idolis sacrificant suis, quod credunt, sospitatoribus."

⁷ *Loc. Cit.*

⁸ D'Arvieux's *Manners of the Bedouin Arabs*, P. 52. Tavernier's *Description of the Seraglio*, in his *Travels*, Part III. p. 468.

⁹ *Comp. J. E. Faber's Remarks in the "Observations on the East," Part II. p. 149, et seqq.*

3. *El, Elah,¹ the Terebinth Tree.²*

The above Hebrew words, which etymologically denote “ a strong tree” generally, are employed specially for the terebinth; inasmuch as that is the term by which the ancient translators for the most part, render the original expression.³ The designation of “ a strong tree” fitly applies to the terebinth, as it has a thick but not very tall stem, thick boughs, and very dense twigs and foliage, which it retains all winter. The leaves are of an oblong circular form, and very like those of the olive tree, but of a green colour, with red and blue intermixed; the twigs which bear them always terminate in a single leaf. The flowers resemble those of the vine, and grow in bunches like them; they are of a purple colour, and yield no fruit.⁴ The real fruit of the tree,

¹ אֵיל, אֵלָה.

² Terebinthus Judaica, Celsius, P. I. p. 34, et seqq. The *Pistacia terebinthus* of Linnæus.

³ For a complete investigation into the meanings given to the words אֵיל, אֵלָה, אֵלָח, אֵלוֹן, אֵלוֹן by the ancient translators, consult Gesenius, Thesaurus Ling. Heb. p. 50, et seqq.

⁴ Tournefort says, in his *Voyages*, T. I. p. 145. Il est du Terebinthe comme du Lentisque, c'est-à-dire, que les pieds qui fleurissent ne portent point de fruit, et que ceux qui portent des fruits ordinairement ne fleurissent pas; . . . les fruits assissent sur des pieds differens, rarement sur le même que les feuilles.

which grows between the branches, is of the size of a juniper berry, and hangs in clusters. It is also purple coloured, very resinous and clammy, and contains one small oval seed. Another fruit, or rather excrescence, is found on this tree, scattered among the leaves. It is of the size of a chestnut, but differently shaped, of a purple colour, variegated with green and white. The people of Cyprus say that it is produced by the puncture made by a certain fly with a view to deposit its eggs; and that, on opening it, it is found to be full of small worms. The wood of the tree is white, hard, and resinous. The turpentine is obtained by incisions made in the bark at the beginning of summer. If this is not done regularly, the resin accumulates so as to swell up and crack the stem, and it then exudes in such quantity that the tree is often destroyed. This seems to account for the small number of terebinth trees that are now to be met with in Syria and Palestine,⁵ where they formerly abounded, as is evident from the frequent mention made of them in Scripture. Jacob buried the idols that his people had brought with them from Mesopotamia

⁵ Mariti, (p. 521. et seq.), who also remarks, that the terebinth has been preserved in Cyprus, by the inhabitants being careful to make the incision in the bark at the proper period in summer, when they collect the turpentine. Hasselquist, however, says, (p. 550, 553, 554,) that he saw these trees in abundance in the gardens round Jaffa, and on the road between Rama and Jerusalem; and that he even found them on the rocks on Mount Tabor.

under a terebinth, at Shechem. Gen. xxxv. 4.* An angel appeared to Gideon under a terebinth-tree at Ophra. Judges vi. 11, 19. In 1 Sam. xvii. 2, 19; xxi. 9, mention is made of a valley of terebinths, [in the English version the valley of *Elah*], where Saul encamped.† It was by the thick boughs of a great terebinth tree that Absalom was caught. 2 Sam. xviii. 9, 10, 14. Saul and his sons were buried under a terebinth at Jabesh. 1 Chron. x. 12. In groves of terebinth trees idols were worshipped. Isa. i. 29. Ezek. vi. 13. Hos. iv. 13. In Isa. i. 30, the prophet declares that idolaters shall be as a terebinth, “whose leaf fadeth,” *i. e.* which dies; for, as this tree never loses its foliage when in a healthy condition,⁶ the meaning must be, that the leaves fall in consequence of the tree perishing by the drying up of the sap. On the other hand, the same prophet, (ch. lxi. 3,) describes the revived mourners of Zion as “*terebinths of righteousness*,”⁷ ever-green and flourishing;—“the planting of Jehovah to his glory.”

The terebinth is reckoned one of those trees that reach a very great age. The one under which Ab-

* The English version has in this, as in most of the other passages quoted, the word “*oak*.”—*Tr.*

+ See *De Lamartine's Travels in the East*. Chambers' Edition, p. 77.—*Tr.*

⁶ This is noticed by Aristotle, Theophrastus, and Pliny, (Book XVI. cap 21.) Belon, it is true, speaks of having seen terebinths destitute of foliage (Observat. Book I. chap. 44); but these must have been sickly trees.

⁷ אֵילֵי הַצֶּדֶק.

raham was supposed to have erected his tent, near Hebron, was pointed out in the days of Josephus,⁸ and even of Jerome.⁹ Between Jerusalem and Bethlehem there stood, so recently as the middle of the seventeenth century, an aged tree which was called *Mary's Terebinth*; because under it the Virgin was believed to have reposed on her way from Bethlehem to Jerusalem, to present her child in the temple. It was the only tree of the species in that district, and overshadowed a large space of ground with its wide-spreading branches. It was held in veneration by Mahometans as well as Christians; but, unfortunately, in the year 1646, a peasant having set fire to the stubble in an adjoining field, the flames reached this noble patriarch of the forest, and it was reduced to ashes.¹⁰

4. *Allah, Allon, Aelon*,¹ the Oak.²

The first of these words occurs only once, *viz.* in Josh. xxiv. 26, where it is used to denote the tree under which Joshua erected a stone of memorial. In the Greek and Syriac versions it is translated "a terebinth." Yet the second word *Allon*, which is of

⁸ Jewish War, Book IV. ch. 9, § 7.

⁹ De locis Hebraicis unter Drys Mambre: Usque ad aetatem infantiae meae, et Constantii regis imperium, terebinthus monstrabatur pervetus, et annos magnitudine indicans, sub qua habitavit Abraham.

¹⁰ Mariti, p. 520.

¹ אֵילֹן, אֵלֹן, אֵלָה.

² Quercus. Celsius, Part I. p. 58.

frequent occurrence, and differs from the other only in the final termination, is, by the ancient translators, almost always rendered "an oak." The third word, *Aelon*, is found to bear the same acceptation in all these versions, except at Judg. iv. 11, where the Syriac has "a terebinth."³ It designates etymologically, "a strong tree,"⁴ and is used specially and principally of the oak, as are also the two other names.⁵ There are several species of oaks in Palestine. Pococke mentions five, and gives their botanical descriptions.⁶ The oaks of Bashan, a district on the east of Jordan, are mentioned, Isa. ii. 13. Ezek. xxvii. 6, and Zech. xi. 2.⁷ Abraham dwelt in a grove of oaks, at Mamre, near Hebron.⁸ Gen. xiii. 18; xiv. 13; xviii. 1. An oak grove at Moreh,* in the neighbourhood of Shechem, the modern Nablous, is spoken of in Gen. xii. 5, 6; xi. 30; and

³ The particular places are mentioned by Gesenius, in his Thesaur. Ling. Heb. p. 50.

⁴ The root is אֵל to be strong.

⁵ אֵלֵל, which is the root of אֵלֵה, and אֵלֵן, has borrowed its meaning from אֵל, mentioned in the preceding note.

⁶ Description of the East, Part III. § 269. Comp. Olivier Voyages, Tom. II. p. 6, et seqq.

⁷ See Rosenmüller's Bibl. Geography, Vol. II. Part I. p. 128.

⁸ Loc. Cit. Part II. p. 299.

* In most of the passages here quoted, the word which Rosenmüller renders an *oak*, is, in the English version, translated "a plain."

in that quarter there seems also to have been "an oak or oak-grove of magicians,"⁹ [in the English version, "the plain of Meonenim,"] where such persons lived, or where they practised their arts. Judges ix. 37. Deborah, Rebekah's nurse, was buried under an oak at Bethel, (Gen. xxxv. 8,) which thence received the name of *Allon-bachuth*, i. e. the oak of weeping. A grove of oaks, at Thabor, in the tribe of Benjamin, is mentioned 1 Sam. x. 3. In oak-groves idols were worshipped, Hos. iv. 13, and of oak-wood their images were made. Isa. xliv. 14.

5. *Almuggim, Algummim*,¹ *Sandalwood*.²

Among the articles of merchandise which the fleet of Hiram, king of Tyre, brought from Ophir, was *Almuggim-wood*. 1 Kings x. 11, 12. In the parallel passages, 2 Chron. ix. 10, 11, and 2 Chron. ii. 8, it is written, *Algummim*; but such transpositions of letters, more especially in foreign words, are found in all languages. The Greek translator of the book of Kings explains the Hebrew word by "hewn-wood;"³ but in both the places in Chronicles it is rendered "pine wood."⁴ This is also the in-

⁹ אֵלֹן מְעוֹנִימִים.

¹ אֵלְגוּמִים, אֵלְמִגִּים.

² Celsius P. 1. p. 171. Ligna pretiosa ex India Orientali. An *Sandali* ?

³ Ξύλα πελεκητά

⁴ Ξύλα πύκινα,

terpretation of the old Latin version at 2 Chron. ii. 8⁵; but, in the two other passages, it gives it the acceptation of the "thyine wood."⁶ The timber of the thyon or thyia tree, which grew in the north of Africa, was very durable; it was employed by the Romans, (who also called it the *citrus*), as a material for the roofs of temples and the most costly works of art.⁷ But as the almuggim wood came from Ophir, which was probably a harbour in the south of Arabia, whence commerce was carried on with India,⁸ the conjecture of Kimchi is not improbable, that the wood in question was the same as what the Arabs call *el-bakam*,⁹ *i. e.* the Brazil¹⁰ or

⁵ *Ligna pinea.*

⁶ *Ligna thyina.*

⁷ See Voss on Virgil's *Georgics*, II. 126.

⁸ See Rosenmuller's *Bib. Geogr.* vol. III. p. 177.




⁹ **البقم** For a description of this tree from Abulfadli and Edrisi, see Celsius, Part I. p. 176.

¹⁰ Kimchi says, (on 2 Chron. ii. 8,) that the Arabic *bakam* denotes the wood commonly called Bresil (בלע"ז בראזיל). Celsius (Part I. p. 175,) thinks it strange that not only Kimchi, who lived above three centuries before the discovery of America, but also Maimonides, who lived somewhat earlier, have both mentioned Brasil wood, (the latter in his *Comment. on the Tract. Shebit*, cap. vii. § 2,) whereas it is commonly supposed to have derived its name from the province of Brasil in South America, whence the best kind is brought by the Portuguese. But both the wood and its name were known long before the discovery of America, as is manifest from extant documents of the fourteenth century, from which Carpentier has given extracts in his *Glossary*, under the words "Brasile, Briciacum, Brisillum." From them it appears that the name Brasil or Bresil

red sandal wood. Western Asia still receives sandal wood from Arabia.* The tree which yields this wood¹¹ grows in the East Indies, and reaches the size of a walnut tree; the boughs are prickly, the leaves of a longish but irregular shape and downy; the flowers yellow and hanging in clusters like grapes. The fruit consists of a pod about a finger-length in size, and curved at the end, which contains two or three flat beans. The wood is firm, hard, and heavy; black outside, but very red inside; without smell or taste.¹² It is esteemed very precious in the east, and forms an important article of trade, being used not only as a red dye-stuff, but as a cure for the bites of serpents, and also in building. The Indians carve their idols of sandal-wood, and adorn their temples with it; tables and other articles

was used to denote any brilliant colour, as well as the substances from which it was prepared. Comp. Adelung's German Dictionary, Part I. p. 1158 of the 2d edition.

* The Agal-wood, say Niebuhr (Descr. of Arabia, p. 144,) is carried in great quantities from Siam, Malacca, China, and perhaps from other countries of India, by the Arabian and Persian Gulfs to Turkey."

¹¹ The *Pterocarpus Santalinus* of Linnæus. The Arabs write the name  and  but they have evidently formed it from the Persic,  That, again, is the Sanskrit word *Tchandana*. Red sandal-wood is called, in Sanskrit, *Rakta-tchandana*.

¹² Yet there is also a white sandal-wood (*Santalum Album*) which grows to a great height, and the yellowish-white wood of which has a strong aromatic odour, and is used as a per-

of furniture are likewise made of it.¹³ Solomon caused to be made of *almuggim-wood*, pillars* for the temple, and instruments for the temple music, 1 Kings x. 12; 2 Chron. ix. 11. From its being said in 2 Chron. ii. 8, that the *almug* was one of the trees Solomon procured from King Hiram, "out of Lebanon," some¹⁴ suppose that the word designates a species of pine that grew on that mountain. But in the parallel passage in 1 Kings v. 8, there is mention of only cedars and cypresses, so that the addition of "*almug*" in the book of Chronicles appears to have been the interpolation of a transcriber. In 1 Kings x. 12, it is said that no *almug* trees† were seen in Judea after the time of Solomon; but, had it been a tree of Lebanon, like the cedar and cypress, it would not have become so rare.

fume at the burning of the bodies of persons of distinction. When pulverised and made into paste, it serves as a fragrant ointment. A decoction of it is administered in fevers and other diseases. See *Rumphius'* Herbarium Amboniense, Part II. p. 42, and Wahl's East Indies, Part II. p. 863.

¹³ See Celsius, loc. cit. p. 179, et seqq. Faber's Archæology of the Hebrews, p. 374 et seqq., and Wahl, loc. cit.

* In the passage in Chronicles the English version has "*terraces.*"

¹⁴ As J. Chr. Beil, in his Exercitatio de lignis ex Libano ad templum Hierosolymitan. petitis (Brunswick 1740, 4to. p. 35. Comp. Symbolæ Haganae Cl. I. Fasc. 2. p. 35, and Biblioth. Brem. Cl. II. Fasc. 2, p. 493.

† In the English version it is "there came no *such* *almug* trees, nor were such seen unto this day."

6. *Eres*,¹ the Cedar.²

The word *Eres*, which occurs so frequently in the Old Testament, is, by the ancient translators, universally rendered "Cedar," an interpretation that is confirmed by the fact of the modern Arabs denoting that tree by the same name.³

The *Eres* tree, moreover, is repeatedly spoken of as peculiar to Lebanon; and, from the earliest times, that region was famous for its cedars. See, for example, 1 Kings iv. 33. 2 Kings xix. 23. Song of Solomon v. 15. Isa. ii. 13; xxxvii. 24. Ezekiel xxvii. 22; xxxi. 3, 5. Amos ii. 9. Psalms xxix. 5; xcii. 12. These trees, indeed, are not confined to Lebanon,

¹ אֶרֶז.

² *Cedrus Libani*. Celsius, (Part I. p. 106, et seqq.) who is wrong, however, in supposing that the Hebrew name designates the species of pine called the *Pinus Sylvestris*. That opinion has been fully disproved by Jac. Trew, (a physician and naturalist of Altdorf,) in his *Historia Cedrorum Libani*. Nuremberg, 1757, 4to.; and in the *Apologia et Mantissa Observationis de Cedro Libani*, 1767. Both these Dissertations have been reprinted in the *Nov. Acta Acad. Curios.* Tom. I. II. Comp. Sam. Oedmann's *Miscell. Collect. in Physics*, Part II. p. 204, et sqq.

سوس

³ ارس. In the Aramæan dialects אֶרֶז likewise denotes the cedar. At Aleppo the fir tree is included under the name *Ars*, the cedar being, like it, of the pointed leaf class of trees, and the wood of both having some kind of resemblance. See Niebuhr's *Description of Arabia*, p. 149.

for similar cedars grow on the ranges of Amanus and Taurus in Asia Minor; but they do not attain the height nor strength of those of Lebanon.⁴ The cedar belongs to the family of pointed leaved trees, and has, in its outward appearance, considerable resemblance to the pine, the fir, and others of that class; but it has a much thicker and stronger stem, so that full grown cedars have, at some distance, the look of large wide-spreading oaks. The main trunk is short, and soon branches out into three or four large boughs, some of which grow to the height of ten feet. Pococke found that one, which had the roundest but not the largest stem, was twenty-four feet in circumference.⁵ Cedars are often mentioned as the highest trees known to the Hebrews, Ezek. xxxi. 5; xvii. 22. Isaiah ii. 13. Amos ii. 9. And David, in Ps. lxxx. 11, styles them “the cedars of God,” according to the Hebraism which denotes something pre-eminently great and excellent. In the sublime description given in the twenty-ninth Psalm, of the might and majesty of Jehovah, it is said, at ver. 5, that “his voice (*i. e.* the thunder or thunder bolt) shatters even the cedars of Lebanon.” The oldest trees are known by the circumstance of the foliage and small branches being found only at the top.*

⁴ See Belon Observations. Livre II, Chap. 107, 110.

⁵ Pococke's Description of the East, Part II. p. 153.

* Burckhardt's Travels in Syria, p. 63. This seems to be pointed out by the Hebrew word **צִמְרֵת**, in Ezekiel xvii. 3, “the highest branch of the cedar,” and chap. xxxi. 3, “his top was among the thick boughs.”

The needle-shaped leaves are shorter than those of the pine; they grow in bunches of more than twenty, like those of the larch, but they are of a firmer texture, and are not deciduous. The cones, which stand erect, are of a bright green colour, and an oval shape, five inches long and four broad; they adhere closely to the bark, the colour of which is a clear grey or brown. The beauty of the cedar consists in the symmetry of its wide spreading boughs. The wood is reddish with streaks, and does not seem to be harder than that of white fir. The resin, which exudes both from the stem and the cones, is, according to Schulz,⁶ "as soft as balsam; the smell is very similar to that of the balm of Mecca. Every thing, indeed, about this tree has a strong balsamic perfume, and hence the whole forest is so perfumed with fragrance that a walk through it is delightful." This is probably the "scent or smell of Lebanon," to which reference is made in Hosea xiv. 6, and Song of Solomon iv. 11. There is scarcely any other kind of timber that combines so many advantages for building as the cedar. The wood is hard and free from knots, is not liable to be worm eaten, and is withal so durable, that some have supposed it to be incorruptible. It is on this account employed for beams and rafters in the roofs and floors of houses. The castle of Persepolis,⁷ the temple at Jerusalem, (1 Kings vi. 9, et sqq. Ezra iii. 7), and the royal palace there,

⁶ Leitungen des Höchsten, Part V. p. 459.

⁷ Quintus Curtius, in his *Histor. Alexand. Magni. Lib. V. Cap. 7.* *Multa cedro ædificata erat regia.*

(2 Sam. v. 11 ; vii. 2), were all built of cedar wood ; and there was so much of it made use of in the last mentioned edifice, that it obtained the name of the “ house of the forest of Lebanon,” 1 Kings vii. 2. 2 Kings x. 17. In Tyre the masts of the ships, and the wainscot of the palaces were formed of cedar. Ezek xxvii. 5, 6.

Of the forests of cedar which once covered Lebanon, there are at present only a very few remains. The well known cedar grove, commonly visited by travellers, lies at the foot of the steep acclivity of the higher range of Lebanon Proper, opposite the village of Hadet. It is distant about half a league from the direct road to Bshirrai, and about a league and a quarter from that place, in the neighbourhood of which is the Carmelite monastery of *Mar-Serkis*, *i. e.* Saint Sergius. Mayr,⁸ in the year 1813, computed the number of trees at 800 or 900, including great and small. Among the former he remarked nine principal trees, distinguished from the rest by their age and the thickness of their stems, but not by their height, in which they were exceeded by younger trees. The circumference of the trunk of the largest cedar (at the distance of four feet from the ground), was fully twenty feet. A fallen bough measured thirty paces. The trunks of five of the largest branched off into three or four divisions, each stem in which was equal in thickness to the trunk of our largest oaks. *Burckhardt*, in the autumn of 1810, counted “ eleven or twelve cedars of the oldest and

⁸ *Adventures of a Swiss*, Vol. III. p. 76.

best looking trees; twenty-five very large ones; about fifty of middling size, and more than three hundred smaller and young trees." Besides this cedar grove, Seetzen⁹ discovered two others, which were of greater extent than the one described, but they have been mentioned by no other traveller.

7. *Oren*,¹ the *Pine Tree*.²

Among the trees of whose timber idols were formed, mention is made in Isaiah xlv. 14, of the *Oren*, by which both the oldest Greek and the oldest Latin translators understood the pine tree.³ The same kind of tree is likewise denoted by the corresponding Chaldee term.⁴ But, as it is said in the above cited passage, that the *Oren* tree has to be planted, and that "the rain causes it to grow,"⁵ we are not to understand by it the wild pine,⁶ but what the ancients called the domestic pine, which was raised in gardens on account of its elegant shape, the melodious rustling of the leaves, and the pleasant fruit it yields, the Pignola nuts of the Italians.⁷ The pine in

⁹ See Zach's Monthly Correspondence, Vol. XIII. p. 549.

¹ אֶרֶן.

² The *Pinus Pinea* of Linnæus.

³ Πίνυς, Pinus,

⁴ אֶרְנָא.

⁵ נִטַּע אֶרְנָא וְנִשְׂמַח יְגִדָּלָהּ.

⁶ *Pinus Sylvestris*.

⁷ Virgil, in his *Georgics*, (IV. 112), says :

— Pinosque ferens de montibus altis
Tecta serat late circum.


question is a high tree, with a strong and durable stem. It puts forth its branches, not like the common forest pines, from the middle of the stem, but from the top; the fine needle-shaped leaves, which hang down like hair, are about half a foot long, and are evergreen. The younger Pliny⁸ compares with the form of this pine the flames of Mount Vesuvius, which, in like manner, dart up as in a long stem, and then shoot forth into branches. The tree bears large hard cones, in which are embedded kernels of an oblong shape, white, fat, oily, but sweet to the taste, and covered with a yellow husk. Like several other pines, it yields timber of a fine grain, easily wrought and durable; and, therefore, it is not unlikely that it was employed for the purpose mentioned in the above passage in Isaiah.⁹


and Ecl. VII. 65.

Fraxinus in sylvis pulcherrima, pinus in hortis.

Olivier (Voyages Tom. IV. p. 27), found in the neighbourhood of Beirout a small wood of very beautiful pines, (*pins à pignons, Pinus Sativa*), which had been planted by the famous Emir Fakhr-ed-din, in the seventeenth century. But Djezzar Pacha caused many of them to be cut down to furnish timber for the building of his palace.

⁸ Letters, Book VI. Letter 16.

⁹ Celsius thinks (Hierobot, P. I. p. 192,) that the Hebrew  denotes the tree which the Arabs designate by a similar

name,  Aran. Abulfadli describes it as a thorny tree, which grows in Arabia Petræa, and most commonly in valleys and low lying districts; if found on the hills, the branches are less prickly. The fruit has the form of a small grape. The berries are at first green and bitter, then red, and at last black and somewhat sweetish. *Sprengel* (Hist. Rei Herb. I. 14),

8. *Eshel*,¹ the *Tamarisk*.²

Abraham, it is said, in Gen. xxi. 33, planted, at Bersheba, an *eshel*.* This name denotes, in Arabic,³ the eastern tamarisk, which differs from that of the south of Europe both in height and strength, and in the form of the leaves and boughs.⁴ Among the

thinks this description points out the common caper tree, the *Caparis Spinosa* of Linnæus; whilst *J. E. Faber*, in his posthumous MSS. Notes on Biblical Botany, thinks it applies to the *Rhamnus Siculus Pentaphyllus* of Shaw. But neither of these trees "is planted," as is said of the *Oren* in Isa. xlv. 14, and as they are mere shrubs, they do not yield wood of which images could be constructed. [The English version, like most others, translates *Oren* an ash-tree, the elementary letters of the Hebrew being found in the Latin *Ornus*. Such is also the rendering of Gesenius in his Translation of Isaiah. *Link*, in Schröder's Botan. Journal, (IV. 252), identifies the tree mentioned by Abulfadli with the *Flacurtia Sepievia* of Roxburgh. *Rabbi Tanchum*, (on the Babyl. Talmud. Para. 96,) says the *Oren* is a species of cedar or pine, of the wood of which masts were constructed.—TR.]

¹ אֶשֶׁל

² The *Tamarix Orientalis* of Linnæus.

* In the English version, it is "a grove."

³ عس

اثل; pronounced by the common people *athle*. See

Prosper Alpinus de Plantis Ægypti. cap. 9 [who gives a drawing of it, which Forskäl says is not very accurate.]

⁴ *Forskäl*, in his Flora Ægypt. Arab. (p. 206) gives the distinguishing points of difference [They will be found in Taylor's Fragments to Calmet, Vol. IV. p. 581. But, since the period when Forskäl wrote, the subject has been carefully exa-

trees with which the villages in Egypt are surrounded, there are commonly several *athles*; and, according to Sonnini,⁵ they are as lofty and vigorous as the oak. The leaves are long, alternate, very small, and of a pale green colour. The branches are commonly loaded with gall-nuts, which, before they dry up, are full of a beautiful bright red sap. The people of Egypt generally use the wood of this tree for fuel and building; bowls and drinking vessels are also made of it.⁶ Burckhardt found this tree (which he calls "*Ithel*,⁷ and a species of Tamarisk") in the gardens round Medina, and he remarks that the Arabs cultivate it on account of the hardness of the wood, which they use for the saddles of their camels, and for other articles that are exposed to rough hand-

mined by Ehrenberg; and, judging from the results he has published in the *Linnæa* of Schlechtendal (II. p. 241, et seqq.) as quoted by Winer, there would seem to be five different varieties of the *Tamarix Gallica*, viz. the *T. Gall. Nilotica Glauscescens*, found on the banks and islands of the Nile, and in Syria; the *T. Gall. Nilotica Cinerea*, about Suez, (both these are shrubs); *T. Gall. Arborea*, about Cairo; *T. Gall. Heterophylla*, on the island of Philæ at Syene; *T. Gall. Mannifera*, in the vallies of Sinai, which yields manna.—Tr.]

⁵ Travels, Vol. I. p. 264, et seqq. There is a figure of the tree on Plate V. fig. 1.

⁶ *Golius*, in his *Lex. Arab.* p. 21, gives a good description of this tree from *Zamachshari*, which *J. D. Michaels* has embodied in his *Supplem.*, p. 136. *Comp. Faber* and *Reiske's* *Opuscc. Medica ex Monument. Arabum*, p. 137. *Golius* correctly remarks the consonance of the words *اثل* and *אִתְלָא*.

⁷ *اثل*, Travels in Arabia, p. 358.

ling. That this tree grows also in Syria is attested by Dioscordides.⁸

According to 1 Sam. xxii. 6, Saul had his dwelling under a tamarisk ; and under such a tree he and his sons were buried, 1 Sam. xxxi. 13. [The English version has simply " a tree."] In the parallel passage in 1 Chron. x. 12, we find *elah* instead of *eshel*. The former word denotes, as we saw above, (at p. 237,) sometimes a strong tree generally, at other times the terebinth ; and we have the testimony of Rabbi Jonah or Abulwalid, in his Hebrew-Arabic lexicon,⁹ that the Arabic term *athle* is not unfrequently used for any large tree,* as was the word *eshel* by the later Hebrews.

9. *Botnim*,¹ *Pistachio Nuts*.²

Among the choicest fruits of Palestine which Jacob sent as a present to his son Joseph in Egypt, mention is made of *botnim*, Gen. xliii. 11. The ancient

⁸ Book I. cap. 117.

⁹ See the quotations in *Gesenius Thesaurus*, p. 159. *Celsius*, in his *Hierobot.* (Part I. p. 535, maintains that אֵשֶׁל always signifies a tree generally, and never a tamarisk ; but that notion has been satisfactorily refuted by J. D. Michaelis in his *Suplem.* p. 134.

* Thus it is the name given to the sacred tree found in the ruins of Babylon. See *Bib. Cab.* Vol. XVII. p. 20.

¹ בֹּטְנִים.

² *Pistacia*. *Celsius*, Part I. p. 24, et seqq. Comp. *Bochart's Geograph. Sacr.*, Part II. Lib. I. cap. 10, p. 419.

versions of the East³ render the Hebrew word "*pistachio nuts*," the fruit of a tree very like the terebinth,⁴ and hence the Septuagint has translated *botnim* by "terebinth." The fruit of the terebinth, however, (which is a useless substance, of the size of a pea.) would have been a very unsuitable present to a man like Joseph; but the fruit of the pistacia tree may justly be reckoned among the finest productions of Palestine. The nuts are of the size of a hazel nut, but of an oblong angular form; the kernel is of a greenish colour, and, (though somewhat oily,) has a very agreeable taste. It was held in high esteem among the ancients; and Dioscorides⁵ informs us it was reckoned a good stomachic, and, when ground down and mixed with wine, was used as a cure for the bite of serpents.

10. *Becaim*,¹ Pear Trees (?)

It is said in 2 Sam. v. 23, 24, (Comp. 1 Chron. xiv.

³ Namely, the Samaritan, the Samaritan-Arabic, the Arabic of Erpenius, and the Persian. The last mentioned has

خام: *Pusteh*, of which the Arabs formed فستق *Fostak*, the Greeks Πιστάκια and the other Europeans *pistacia* or *pistachio* [sometimes, says Dr. Johnson, called *fistich*.] Rabbi *Bartanora* remarks, in the Talmud. Tract. Shebiith, cap. vii. § 5, that נטב is the fruit which the Arabs call פסתק.

⁴ The *Pistacia Terebinthus* of Linnæus.

⁵ Book I cap. 178. Πιστάκια τὰ μὲν γενώμενα ἐν Συρίᾳ, ὅμοια στροβίλοις, εὐστόμαχα, ἐσθιόμενα δὲ καὶ πινόμενα ἐν οἴνῳ λιτὰ ἐρπετοδῆκτοις βοηθεῖ.

¹ נטב

14, 15,) that during a war between the Hebrews and Philistines, whilst the latter lay encamped in the valley of Rephaim, David received a command from the Lord not to attack them in front, but from behind, and to approach them in the direction of the *Becaim trees*.² He was farther instructed to wait until he should hear a rustling in the tops of the *becaim trees*, for then the Lord would go before him to smite the Philistines. By the *Becaim* the Rabbins understood mulberry trees;³ but that interpretation is neither countenanced by the ancient versions, nor by the occurrence of any similar term in the cognate languages. In Arabic,⁴ *Baca*, according to Abulfadli,⁵ is the name of a shrub which grows around Mecca, and is not unlike that which yields the famous balm,⁶ only its leaves are longer. The fruits of the two shrubs are also similar, but those of the *Baca* tree are larger and rounder. When a leaf is broken off, there flows a white acrid sap. The wood is used for rubbing the teeth, as a preventive of tooth-ache, and to strengthen the gums. Celsius, J. D. Michaelis, Gesenius, and others, think that the Hebrew word *Baca* designates this shrub. It is very uncertain, however, whether

² מִמּוֹל בְּכָאִים.

³ תוֹתִים. توت Tūt is also the Arabic for a mulberry tree. See Höst's Description of Fez and Morocco, p. 305.

⁴ بَكَاءَ.

⁵ In Celsius Hierobot. Part I. p. 339.

⁶ بِشَام. See the present volume, p. 147, 151.

it be found in Palestine; and the mention of a “rustling in the tops of the Becaim,” seems to point rather to large trees than to shrubs. It is, therefore, preferable to follow the most ancient Greek and Latin versions, by translating “pear trees,”⁷ which is the oldest rendering extant, though, certainly, it is not confirmed by any of the cognate dialects.

11. *Berosh, Beroth, the Cypress.*²

In most of the passages where the Hebrew word occurs, it is by the oldest Greek and the Syriac translators rendered, “a cypress”³; and what is said of the *Berosh* suits that tree very well, particularly in its being so often mentioned in connection with the cedar of Lebanon, the wood of both trees being peculiarly adapted for building. Isa. xiv. 8;

⁷ *Απίους, Pyra*. This, however, is found in the scriptures, only at 1 Chron. xiv. 14, 15. In the other passage mentioned above, (viz. 2 Sam. v. 23, 24), the Septuagint has *κλαυθμῶν*, “weeping,” and *ἄλσος τοῦ κλαυθμῶνος*, the “grove of weeping,” from **בְּכָא**, which has the same signification as **בְּכָה**, and hence **עֵמֶק הַבְּכָא** in Ps. lxxxiv. 7, (in the English version, “the Valley of Baca,”) is “the valley of weeping,”—*the vale of tears*.

¹ **בְּרוֹשׁ, בְּרוֹת**. The latter, which is the Aramæan pronunciation, occurs only in the Song of Solomon, i. 17.

² Cupressus.

³ A minute investigation of the different meanings of this word, as given in the ancient versions, will be found in *Gesenius Thesaurus*, p. 246.

xxxvii. 24 ; lx. 13. Zech. xi. 1, 2. This adaptation arises from its not being subject to putrefaction, nor to corrosion by worms. Both trees are celebrated by ancient writers as furnishing the best timber for houses and ships.⁴ That Solomon employed both cedar and cypress in the erection of the temple, is expressly stated in scripture, (1 Kings v. 8, 10 ; vi. 15, 34. 2 Chron. xxvii. 3, 5), and confirmed by the testimony, not only of Josephus,⁵ but of Eupolemus, and of Alexander Polyhistor.⁶ Pliny mentions,⁷ that the doors and other parts of the temple of Diana at Ephesus, were made of cypress-wood ; and, in like manner, the two doors at the entrance of the temple at Jerusalem were constructed of the *Berosh-tree*. Athenæus describes⁸ a splendid ship of Hiero, which contained, among other valuables, a shrine of Venus that was incased in cypress-wood ; and so the temple of Jerusalem was floored with planks of *berosh*, (1 Kings vi. 15. 2 Chron. iii. 5), of which likewise were formed the decks of the ships of Tyre, Ezek. xxvii. 5. The musical instruments of David were of *berosh-wood*, (2 Sam. vi. 5) ; and lances were fabricated of the same, Nah. ii. 3.

The cypress is high, and has a straight and vigorous stem. In the Apocryphal book of Ecclesiasticus,

⁴ *Virgil's* Georgics, II. 443.

———— Dant utile lignum,

Navigiis pinos, domibus cedrumque cupressumque.

⁵ *Antiq.* VIII. 2. 7.

⁶ In Eusebius *Præpar. Evang. Lib. IX. Cap. 30.*

⁷ *Hist. Nat. Lib. XVI. Cap. 42.*

⁸ *Deipnosoph. Lib. V. Cap. 207.*

(ch. l. 24), the high priest, Simon, son of Onias, is compared to “a cypress towering to the clouds,” on account of his tall and noble figure. The boughs shoot forth in regular circles, which gives to the tree the appearance of a cone. The fruit is also of a conical shape, being composed of scutiform scales, each of which covers several germs that grow into small square nuts. The stem yields a soft resin, somewhat like turpentine, with a pungent taste, but pleasant smell.

The conjecture of J. E. Faber⁹ is very probable, that the Hebrew name *Berosh* included three different trees which resemble each other, viz. the evergreen cypress,¹⁰ the dwarf-cypress, or *thua*¹¹ of the ancients, and the savine-tree or *juniperus sabina*. The wood of the second of these trees is in Rev. xviii. 12, called *thyine-wood*¹², both in Luther’s and the English version. It is there mentioned among the precious wares for which merchants would find no purchasers, in consequence of the fall of Babylon. The wealthy among the Romans adorned their villas with this wood. When Appius Claudius, (in the work of Varro¹³), is describing the splendour of a certain villa, he celebrates the golden decorations, but praises in still higher terms, the wainscoting of precious *thua*-wood. Being so much in demand, it became an important article of trade. The *juniperus sabina*,

⁹ Archæology of the Hebrews, p. 371.

¹⁰ *Cupressus semperviva*.

¹¹ *Cupressus Thyoides*. See Celsius, Part II. p. 22, sqq.

¹² From the Greek ξύλον θυϊνον.

¹³ *De Re Rustica*, Lib. III. Cap. 2.

which is the last mentioned of the above trees, is so like the cypress, that the ancients often called it by that name, and the moderns have noticed the resemblance, especially as to the leaves.¹⁴ Hence, even among the Greeks, both trees bore the old eastern name of Berosh, Beroth, Brutha, or Brathy.¹⁵ The *Sabina* grows to a considerable size. Rauwolf¹⁶ saw one near Tripoli, which was so thick that a man could not clasp the stem with both arms. The wood is valued by the Turks as being well adapted for the construction of roofs and vaults.¹⁷

12. *Gopher*,¹ a kind of *Cypress*.

According to Gen. vi. 14, the ark which served as an asylum to Noah and his family during the flood, was built of *Gopher-wood*. The name does not oc-

¹⁴ *Bauhin* Pinax theatri botan. 478. *Sabina folio cupressi*. *Tournefort* Voyage de Levant, T. II. p. 137. Sabine—ses feuilles—sont de la tissure de Cypres.

¹⁵ *Plinius* Hist. Nat. L. XXIV. Cap. 11. *Sabina, Brathy* appellata a Graecis, duorum generum est; altera tamarici similis folio, altera cupresso. Quare quidam Creticam cupressum dixerunt. *Dioscorides* B. 1. cap. 105. Βράδυς—ἔστι δὲ τούτου εἶδη δύο· τὸ μὲν γὰρ αὐτῶν ἐστὶ τοῖς φύλλοις ὁμοιον κυπαρίσσω.

¹⁶ *Travels*, p. 57.

¹⁷ The opinion of *Celsius*, (Part I. p. 74, sqq.) is wholly untenable, that ברושׁ is the cedar of Lebanon, which, as we have already seen, (at p. 246), is designated by the Hebrew term ארז.

¹ גפר.

cur elsewhere ; but it is supposed to denote a species of cypress, of which three kinds have been above enumerated. Though this designation seems to have become obsolete, having fallen into disuse among the later Hebrews, yet the radical consonants in “gopher” and “cypress” are substantially the same²; and the words probably signify, etymologically, “a resinous wood,”³ which that of the cypress is. Being at once light, and not subject to rot, it was often used in ship-building. Alexander the Great caused the great fleet which he prepared, to be constructed of cypress-wood, which was brought from Assyria.⁴

² The first two consonants of the words גֹּפֶר and κυπαρ, viz. g and ph, k and p, differ only in the soft or hard manner in which they are pronounced, for ισσος in the Greek κυπαρίσσος, is a mere addition to the root.

³ The words כֹּפֶר *pitch*, גֹּפֶרֶת *sulphur*, and גֹּפֶר *קִיטָּר*, are cognate terms, both in sound and sense.

⁴ See *Arrian de expedit. Alexandri*, Mag. Lib. VII. p. 151 of Stephen's edition, and *Strabo*, Lib. XVI. Cap. 1, § 11, p. 741 of Casaubon's edition. Comp. *Bochart's Geogr. Sacr.* Part I. p. 25, and *Celsius*, Part I. p. 328, sqq. Eutychius reports in his *Annals*, (p. 34,) a tradition that the ark was built

من خشب ساج *of the wood Sadj*. Now, by this name the Arabs and Persians do not, as is sometimes said, designate *ebony*, but the tree called *Juniperus Sabina*, which has been mentioned above as a species of cypress ; a circumstance which confirms the opinion that the gopher-wood is identical with the cypress. See *Wahl's Geography of the East Indies*, Vol. ii. p. 795.

13. *Hobnim*,¹ *Ebony*.²

In the account given by the prophet Ezekiel of the commerce of ancient Tyre, he says, (ch. xxvii. 15,) that the Tyrians imported from Dedan,³ (a harbour of Southern Arabia, on the Persian Gulf), "ivory and *Hobnim*." These were evidently Indian or African productions, which, like lign-aloes and sandal-wood, reached Syria through Arabia. The resemblance of the Hebrew word *hobnim* to the Latin and Greek names of ebony,⁴ is very manifest; and as this substance was in high esteem among the ancients, for the hardness and fineness of the wood, and its glossy black colour, there can be little doubt that it was an article of trade among the Syrians. Ebony is the heart-wood of a tree which grows abundantly on the east coast of the island of Ceylon. Two centuries ago it was there used for furniture and idol-images more than it is at present, since better kinds of wood have been discovered.⁵ Dioscorides⁶ gives

¹ הַבְּנִים, הוֹבְנִים. [Gesenius conjectures that the plural form was used on account of the ebony being imported in *planks*.—TR.]

² Ebenum.

³ See Rosenmüller's *Bibl. Geogr.* Vol. III. p. 160.

⁴ *Ilebenum*, "Εβενος. The former is used by St. Jerome in his Latin, the latter by Symmachus in his Greek version. Comp. *Bochart's Hieroz.* Part II. Lib. I. Cap. 20, in Tom II. of the Leipsick edition.

⁵ See *Wolf's Voyage to Ceylon*, (Berlin, 1782), p. 101. *Knox's Voyage to Ceylon*, p. 64.

⁶ Lib. I. Cap. 130.

the Ethiopian ebony the preference to the Indian, as being free from streaked veins, whereas the latter has spots and stripes of red and white. Theophrastus⁷ speaks of the best coming from India, because it receives its colour, not from being allowed to lie long, but immediately from nature. Pliny⁸ says that the Indian ebony is seldom of a glossy black; that the best grows in southern Ethiopia,⁹ but that even there it is not abundant, and that on account of its rarity, bars of ebony, along with gold and ivory, were sent as tribute to the kings of Persia.¹⁰ Ebony was first seen at Rome on the occasion of Pompey's triumphal procession after the conquest of Mithridates.¹¹

14. *Hadas*,¹ the *Myrtle*.²

The Arabic term,³ which completely corresponds to the above mentioned Hebrew word, signifies "a myrtle⁴;" and such is the translation of the Hebrew that is given in all the ancient versions. The myrtle-tree, which often reaches, in the east, the height of

⁷ Hist. Plantar. IV. 5.

⁸ Hist. Nat. XII. 4, 9.

⁹ Loc. Cit. VI. 30, 35.

¹⁰ Loc. Cit. XII. 4, 8.

¹¹ Loc. Cit. XII. 4, 9.

¹ הָדָס.

² *Myrtus*. Celsius, Part II. p. 17.

³ هَدَس.

[See Bib. Cabinet, Vol. XI. p. 262.]

⁴ It is only, however, in the dialect of Yemen or Southern Arabia. Elsewhere the common name of the myrtle is ^سأس.

twenty feet,* is either wild or domestic; and of both kinds there is a white and a black. It has long, thick, flexible boughs, with a reddish rind. The leaves are oval, smooth, and evergreen. The flowers are single, and either white, or red and white; they bloom in May, and are succeeded by berries of a brownish black colour, which contain a number of small whitish seeds. Both the leaves and flowers have a mild and pleasant aromatic taste and flavour; and hence the myrtle was a tree in high esteem among the ancients. The Romans reared it in their gardens. Cato recommended to husbandmen the culture of laurels and myrtles, because chaplets or garlands made of them would find a ready sale in neighbouring towns.⁵ In the ornamental gardens of the rich, Horace found the myrtle beside the plane-tree and the laurel.⁶ Virgil⁷ describes the odoriferous scent of Corydon's garden, as arising from the laurels and myrtles that were planted together. The *wild myrtle* has, according to Dioscorides,⁸ broad, lance-shaped leaves, with boughs about an ell long, very flexible, and covered with thick foliage. Between the leaves are berries, which redden as they grow ripe, and have a hard kernel. It grows on mountains and steep declivities. At the feast of Tabernacles, celebrated on the return from Babylon, when the inhabitants of Jerusalem constructed booths of the branches of trees, we find men-

* In Egypt, where it is raised in gardens, it has commonly the size of an apple-tree. *Olivier*, Tom. III. p. 311.

⁵ *De Re Rustica*, Lib. VIII. Cap. 2.

⁶ *Odes*, III. 15.

⁷ *Eccl.* II. v. 54.

⁸ *Book IV.* Cap. 146.

tion made, (along with the palm, the olive, and other trees), of the branches of the wild "myrtle-trees," which were brought from the neighbouring hills, Neh. viii. 15. But when the prophet Isaiah foretells, that in the coming golden age of Israel, Jehovah will plant in the desert, "cedars, acacias, myrtles, and olive trees," (ch. xli. 19;) and that, instead of the thorn-hedge shall grow the fir tree, and instead of the heath, the myrtle, there is no doubt he refers, not to the wild, but to the cultivated tree of that name. The prophet Zechariah, (ch. i. 8, 10, 11), saw in vision a man, on a red horse, in a valley among "myrtle trees."

15. *Sait*,¹ the Olive-Tree.²

The above Hebrew name is explained by all the ancient translators as meaning "the olive-tree," and the Arabic and Syriac designate it by the same word. There are both wild and cultivated olive-trees. The latter reach the height of twenty or thirty feet. The trunk is knotty, the bark smooth, and of an ashy-grey colour. The leaves, which are about two and a half inches in length, are of an oblong shape, like those of the willow, only not indented; they are thick, hard, of a dark green colour on the upper side, and a greyish below. They have scarcely any stalk, and are not deciduous in winter.³ The flowers are white, and grow in small bunches between the leaves.

¹ תִּי.

² *Olea*. Celsius, Part II. p. 331, et seqq.

³ *Theophrast*. Hist. Plant. I. 15. *Pliny*, XVI. 20.

To the flower succeeds the fruit, (the olive) in the form of an oblong roundish berry, which is at first green, becomes pale as it ripens, and, when quite ripe, is of a purple black. This plump fleshy fruit contains a hard kernel with oblong seeds. It ripens towards the end of October and beginning of November. To procure the oil, the olives are kept till they begin to shrivel, and are then put into hot water and pressed. The tree reaches a great age,⁴ is commonly propagated by slips, and bears fruit very copiously. It thrives best in a light dry soil, for in moist and loamy ground it puts forth much foliage without fruit.⁵ This is the reason why it never abounded much in Egypt,⁶ nor is it yet to be found there to any extent.⁷ Palestine, on the other hand, has from

⁴ According to Pliny, (XVI. 44, 90), it will live four hundred years. ["The olive," says Chateaubriand, "may be said to be immortal, since a fresh tree springs up from the old stump. Those in the garden of Olivet (or Gethsemane) are at least of the time of the Eastern empire, as is demonstrated by the following circumstance. In Turkey, every olive-tree found standing by the Mussulmans, when they conquered Asia, pays one *medine* to the treasury, while each of those planted since the conquest is taxed half its produce. The eight olives of which we are speaking, are charged only eight *medines*."—T.R.]

⁵ *Columella de Cultu Hortorum*, Cap. 17. *Florentinus* in the *Geoponica*, or Treatises on Agriculture, Lib. IX. Cap. 4.

⁶ According to *Strabo*, (XVII. 1, 35), fruitful olive-trees grew only in the Heracleotic Nomos, and in the gardens round Alexandria.

⁷ *Sonnini*, ch. II. p. 24. *Olivier* says, (Tom. III. p. 308. Quoique peu commun, il n'y a presque pas de village un peu étendu, ou on ne rencontre quelques pieds d'olivier.

the earliest times, been as rich in olives as are now Italy, Spain, and the south of France. Among the fruit trees of that country, the olive-tree is always enumerated in Scripture, *e. g.* Deut. vi. 11; viii. 8; xxviii. 40; xxxiii. 24. Jos. xxiv. 13. 2 Kings xviii. 32. David had an overseer over his olive-yards, 1 Chron. xxvii. 28; and Solomon gave to the labourers sent him by king Hiram, (besides other provisions), twenty thousand baths of oil, 2 Chron. ii. 10. Oil was one of the productions which the Israelites carried to the markets of Tyre, as is noted by Ezekiel, (ch. xxvii. 17.) *Belon*⁸ found on the hills around Nablous, plantations of olive-trees that were very vigorous, and completely laden with fruit. *Hasselquist*,⁹ when on his way from Joppa to Jerusalem, passed through three beautiful vallies, which were overgrown with excellent olive-trees.

As the olive-tree is always green, it was employed as an emblem of uninterrupted prosperity, Ps. lii. 8. Jer. xi. 16.

In Nehem. viii. 15, a distinction is made between "the olive-tree," (*Saït*), and "the tree of oil," (*Etz-Shemen*.¹⁰) By the latter is probably intended the wild olive-tree.¹¹ Stephen Schulz¹² found near Jericho, beside the bed of a dried-up brook, a number of wild olive-trees, the fruit of which was as large as a plum, and was, consequently, twice the size of the

⁸ *Observations*, Liv. II. ch. 88.

⁹ *Travels*, p. 141.

¹⁰ עֵץ שֶׁמֶן.

¹¹ Oleaster, ἀγροέλαιος.

¹² *Leitungen des Höchsten*, Part V. p. 86.

fruit of the cultivated olive. The inhabitants of the district make from the wild olives an oil, which cannot, indeed, be used for food, but is employed as a healing ointment.¹³ According to 1 Kings vi. 23, the cherubim in Solomon's temple were made of the wood of the wild olive-tree. In the description of the future golden age in Isa. xli. 19, the olive-tree is mentioned among those trees which shall then grow in the wilderness, along with the cedar, the acacia, and the myrtle.¹⁴

¹³ See above, at p. 169, Note 2; and p. 170, et seqq.

¹⁴ Yet the Greek translator of Alexandria renders עֵץ שֶׁמֶן

שֶׁמֶן in 1 Kings vi. 23, and עֵץ שֶׁמֶן in Neh. viii. 15,

by ζύλα κυπαρισσία, *i. e.* cypress-wood, and in Isaiah xli. 19, by κυπάρισσον, the cypress-tree. Celsius thinks, (Part I. p. 309), that עֵץ שֶׁמֶן denotes generally *oily*, *i. e.* resinous

trees, as in Levit. xxiii. 40. עֵץ הָדָר means "beautiful

trees," and עֵץ עֵבֶת "trees with a thick foliage." But

in the three places where the expressions עֵץ שֶׁמֶן and

עֵץ שֶׁמֶן occur, they seem to designate one particular kind

of tree. Besides, the term שֶׁמֶן cannot well be translated

"resin," which is commonly called גִּפְרִית or כִּפּוּר. See above,

at p. 261, note 12. [The English version has in Nehemiah viii. 15, "pine trees," in 1 Kings vi. 23, the "olive tree," and in Isa. xli. 19, the "oil tree."]

16. *Libneh*,¹ the *Storax-Tree*.²

Among the speckled rods which Jacob is said to have placed in the watering-troughs of the sheep, (Gen. xxx. 37, 38), mention is first made of the rods of *Libneh*. The Alexandrian Greek translator interprets this by "Storax," which the Arabs designate by *Lobna*,³ a name exactly similar in its radical consonants to the Hebrew, and which is employed as synonymous with the Hebrew, by the Arabic translator Saadias. The storax-tree, which grows wild in Syria, Arabia, Asia Minor, and also in the south of Europe, resembles the *Cydonia*, or quince-tree,⁴—is about twelve feet high, and puts forth a number of slender branches, with leaves of an oval shape, about two inches long, and an inch and a half broad, and downy on the lower side. The flowers are white, and sweet scented, and hang at the end of the boughs; they grow into small nuts, which contain two hard smooth kernels. A gum is obtained by incisions on the stem of the tree, which is employed in the preparation of powder for incense, and is called, in Hebrew, *Nataf*.⁵

The prophet Hosea, (ch. iv. 13), complains of the Israelites, that they sacrificed and offered incense to

¹ לִבְנֵה.

² *Styrax*.

³ لبني.

⁴ *Dioscorides*, Lib. I. Cap. 80. Στύραξ δάκρυόν ἐστι δένδρου τινός ὁμοίου κυδωνίῳ.

⁵ See above, p. 164.

idols upon mountains and heights, under oaks, terebinths, and *Libneh-trees*, because these afforded a fine shadow.⁶ The Greek translator (who is different from the above mentioned translator of the Pentateuch) renders *Libneh* by “white poplar,”⁷ which derives the epithet of *white*, not so much from the bark, as from the silver-white colour of the lower side of the leaves. But the translator, in giving this interpretation to the Hebrew word, was misled by the etymology.⁸ The meaning given in the Pentateuch has far greater authority, as being much more ancient, and as being supported by the analogy of the Arabic. The mention of the white poplar, moreover, does not so well suit the passage in Hosea, inasmuch as that tree shoots its boughs high up, assuming the form of a pyramid, and, consequently, does not afford a shadow like that of the wide-spreading oak and terebinth-tree.

17. *Lus* ; also *Shaked*,¹ the *Almond-tree*.²

In the narrative respecting the speckled rods which

⁶ תַּחַת אֵלוֹן וְלִבְנֶה וְאֵלֶּה פִּי-טוֹב זֵלָהּ.

⁷ Λύση. [The English version has “poplar,” both in Hosea and Genesis.]

⁸ The root לָבַן means *to be white*. The Storax-tree has its

Arabic name لَبْنِي from لَبَنٌ *milk*, because when an incision is made in the stem, the gum flows like milk.

¹ שָׁקַד, לוֹז.

² *Amygdalus*. Celsius, Part I. p. 253.

Jacob placed in the watering-troughs of the sheep, (Gen. xxx. 37), mention is made of rods of *Lus*. The corresponding Arabic³ term denotes the “almond-tree,” which the most learned Rabbins pronounce to be likewise the meaning of the Hebrew word.⁴ The almond-tree is similar to the peach tree, (for they belong to the same family), but has a more vigorous growth. The leaves are oblong and indented like a saw. The blossoms, which are double, grow into a fruit, the only esculent part of which is the kernel. The rind of the bitter almond, (which is only a variety) contains prussic acid, and to many animals is poisonous.

Almonds, the fruits of this tree, are called in Hebrew *Shekedim*,⁵ (Gen. xliii. 11. Num. xvii. 23), the singular of which word, viz. *Shaked*,⁶ occurs in Jer. i. 11. Eccles. xii. 5, for the “almond-tree.” The difference between *Lus* and *Shaked* seems to be, that the former word designates the “wild,” the latter the “cultivated” tree; for Abulfadli makes an express distinction between them.⁷ The name *Shaked* was

³ ⁵⁰⁻
لوز.

⁴ For example, *Saadias* in *Aben Esra's Commentaries*. Others of them, however, as *Jarchi*, understand by it “the hazel-bush.” The Sept. version has *καρυίτην*, but *καρύα* includes nuts as well as almonds. See *Casaubon* on the *Deipnosoph.* of *Athenæus*, p. 106.

⁵ שקדים.

⁶ שקד.

⁷ In *Celsius*, Part I. p. 254.

no doubt given to the almond-tree, because it blooms earlier than any other tree.⁸ And as the snow-white blossoms are seen on the yet naked boughs,⁹ this appearance is employed in Eccl. xii. 5 as an emblem of the hoary locks thinly scattered on the bald head of old age.

18. *Arab, Zaphzaphah,¹ the Willow.²*

That the first of these words denotes “the willow,”³ is proved by the Arabic name being the same, and by the testimony of the oldest Greek translators.⁴ It is confirmed by the circumstance, that the tree which the name designates is spoken of as growing “by the brooks;” *e. g.* in Levit. xxiii. 40, where among the trees whose boughs were to be used in the construction of tents at the feast of tabernacles, mention is made of “the willow of the brook.”⁵ Ac-

⁸ The root signifies “to wake, to be awake about any thing, to watch it,” and hence, “to make haste, to be eager.” Upon this is founded the *paronamasia* in Jer. i. 11, 12. [“I see a rod of an almond-tree, (*shaked*). Thou hast well seen for (*shoked*), I hasten, &c.] Pliny says, in his Nat. Hist. Book XVI. Chap. 25: Floret omnium prima amygdala mense Januario, Martio vero poma maturat.

⁹ Hasselquist’s Travels, p. 220.

¹ עֲרָב or עֲרָב, צִפְצִפָּה.

² *Salix*, Celsius, Part I. p. 304.

³ غَرَب.

⁴ These render the Hebrew word by the Greek *ivias*.

⁵ עֲרָבֵי נַחַל. *Maimonides* says, in his Comment. on the

furnished by Prosper Alpinus,⁷ Paul Lucas,⁸ and Hasselquist,⁹ there is a particular account of it by Rauwolf.¹⁰ He says, that along the brook, on the outskirts of Aleppo, he found a peculiar species of willow called *Saffaf*. "These trees are of various sizes; the stems, branches, and twigs, are long, thin, soft, and of a pale yellow, and have some resemblance to those of the birch; the leaves are like those of the common willow; on the boughs grow here and there shoots of a span long, as on the wild fig-trees of Cyprus, and these put forth in spring tender downy blossoms, like those of the poplar; the blossoms are pale-coloured, and of a delicious fragrance; the natives pull them in great quantities, and distil from them a cordial which is much esteemed." It is said in the Gemara,¹¹ that the willow called *Saffaf* has a white stem, and round indented leaves.¹²

⁷ De Reb. Ægypt. Nat. p. 194.

⁸ Voyages, Tom. II. p. 91.

⁹ Travels in Palestine, p. 544.

¹⁰ Travels, Part I. chap. 9, p. 111.

¹¹ In the Tractat Succah, fol. 34, p. 1.

¹² Celsius thinks, (Part II. p. 112) that סַפְּפָה means

ס - ו -

"a plain," like the Arabic صَيْف . But there is no reason for departing from the universal opinion of the Rabbins, which is confirmed by the above mentioned Arabic synonym. The Greek Alexandrian translator has mistaken the passage in Ezekiel, for, deriving the Hebrew word from סַפְּפָה , "to consider attentively," he has rendered it by ἰσιβλεπόμενον , which

19. *Armon*,¹ the *Oriental Maple-Tree* or *Plane-Tree*.²

Among the speckled rods which Jacob placed in the watering-troughs of the sheep, mention is made, (Gen. xxx. 37.) of rods of *armon*. This, according to the rendering of the most ancient Greek translator,³ denotes the "plane-tree,"—an interpretation which likewise suits the other place, (Ezek. xxxi. 8.) where the word *armon* occurs, and where the tree is celebrated on account of the rich foliage of its branches. In Ecclesiastic. xxiv. 19, wisdom is compared to a plane tree shooting its high boughs aloft. The stem grows straight up, and has a smooth grayish bark, which comes off every year; the wood is white and hard. The branches are wide spreading, and afford a fine shadow; the leaves resemble those of the vine, are downy on both sides, and hang on long stalks. The blossoms, which appear before the leaves, form large round clusters, and have a whitish

yields no congruous sense. [Comp. the Heb. and Sept. in Ps. lxvi. 7 with Biel's Thesaurus, and Schleusner's Lex. Vet. Test. under ἐπιβλέπω.—Tr.]

¹ עֲרָמוֹן.

² *Platanus*, Celsius, Part I. p. 512.

³ (Καὶ ῥάβδον) πλατάνου. So also the Latin version; and with these agree the Chaldee, the Syriac, and the Arabic, which

have respectively $\overset{50-}{\text{רלן}}$, ܩܠܢ and دلبن , all designating the plane tree. [In both places the English version has "the chestnut-tree."—Tr.]

and grass-green colour. The seed does not ripen till late in autumn; it is embedded in the fruit, which is small, and has a woolly covering. The tree abounds in Syria and Palestine.⁴

20. *Kiddah*,¹ *Ketziah*,² *Cassia*.³

Among the articles of which the holy anointing oil was composed, (Exod. xxx. 24,) *Kiddah* is enumerated. The only other place where the word occurs is in Ezek. xxvii. 19, where it describes one of the wares brought by Arab tribes to the markets of Tyre. In the former passage, the Septuagint translates *kiddah* by "iris," *i. e.* the blue water lily, the root of which, on account of its fragrant odour, is called "violet-root." But in the passage in Ezekiel, the Hebrew word is not translated in the Septuagint at all. The violet-root might have been employed in the preparation of the anointing oil; but it does not suit the passage in Ezekiel, for we cannot suppose that a root so common in Syria and Palestine would have been brought by Arab merchants all the way to Tyre. But in Exod. xxx. 24, *kiddah* is by the oldest Chaldee, the Syriac, and the Latin translators, rendered by "Cassia," which we find mentioned in Ps. xlv. 9, under the Hebrew name of *Ketziath*.⁴ That is a

⁴ See the quotations from travellers in proof of this, in Celsius, loc. cit. p. 513.

¹ קִדָּה.


² קִצְיָהּ.


³ *Cassia Cinnamomea*, Celsius, Part II. p. 360, p. 185.

⁴ The word being derived from קָצַע, "to cut off," denotes




production not only of the East Indies but of Arabia, and therefore it was quite natural for traders of the latter country to carry it on sale to Tyre. Dioscorides says there are in Arabia several kinds of Cassia, one of which is called *hitto*,⁵ a name which is substantially the same with the Hebrew *kiddah*.⁶ Theophrastus⁷ mentions the bark of the Arabian cassia, (not unlike cinnamon,) among the articles used to perfume ointments. We are, probably, to understand him to refer to the wild cassia,⁸ which differs from

properly, "pieces cut off, or fragments," the cassia consisting of pieces of bark. According to Abulfadli (in Celsius, loc. cit.

p. 363) the Arabs call it  *Salichah*, i. e. something taken off or peeled. This Arabic word, says he, designates the bark of a tree which grows in India, and in Oman, (a district of Arabia,) whose leaves are similar to those of the blue lily. The stem is vigorous, and is covered with a strong rind, which

is peeled off it, .

⁵ Κιττώ.

⁶  from , in Arabic  "to split, hew, or tear any thing lengthwise."

⁷ Hist. Plant. Lib. IX. Cap. 7.

⁸ The *Laurus Cassia* of Linnæus. [The accounts given by most writers, both of Cassia and Cinnamon, are confused and contradictory. The subject was thoroughly investigated by the brothers C. G. and Th. Fr. Ludwig *Nees van Esenbeck*, in a tract, "De Cinnamomo Disputatio," Bonn, 1823, 4to, and in the *Botan. Zeitung* for 1831, No. 34, (Comp. *Martin's Pharmakogn.* p. 102, 141, and *Hamilton* in the *Linnæan Transact.* Vol. XIII. p. 556.) They have shewn that the *Laurus Cassia* of Linnæus is not a distinct species, but only the true Cinnamon-tree, (*Cinnamomum Zeylanicum*) in a de-

the true cinnamon-tree. The bark is of a pale brown colour, and of a more-bitter but less aromatic taste than cinnamon. It is also more difficult to reduce to a fine powder; but it yields twice as much essential oil, besides an oily water. It was, therefore, well adapted for use in the preparation of the holy anointing oil. Cassia is likewise mentioned among the odours with which the garments of the "king's daughter" were perfumed, as described in the forty-fifth Psalm, at the ninth verse.

21. *Kinnamon*,¹ *Cinnamon*.²

There is no room for doubt as to the meaning of the Hebrew wórd, seeing the Greeks and Romans received the name of this well known bark from the Phœnicians,³ whose language differed little from that of the Jews. Cinnamon was one of the spices which,

generate form growing wild. With regard to the Cassia bark of commerce, it seems as yet uncertain by what tree it is yielded, or whether it be merely an inferior kind of Cinnamon gathered in bad seasons, or from trees that are old or placed in unfavourable situations. It seems probable that the Cassia from Ceylon is the lowest sort of cinnamon, but the Cassia from Canton, the product of the *Cinnamomum Cassia* (Nees Fratres et Blume) a native of China, and also cultivated in Java.—
Tr.]

¹ קינמון.

² *Cinnamomum*, s. *Canella Zeilanica*, Celsius P. II. p. 350.

³ *Herodotus*, Book III. chap. iii. τὰ κάρφια τὰ μίσι ἀπὸ Φοινίκων μαθόντες κιννάμωμον καλίομεν.

according to Exod. xxx. 23, was to be used in preparing the holy anointing oil for the service of the tabernacle. It is also mentioned with other aromatic spices in Prov. vii. 17. Song of Solomon iv. 14, and Revelations xviii. 13. It is the product of a tree which is indigenous to the island of Ceylon in the East Indies, and is called by the natives *Korundagauhah*. According to the account of Knox, it grows wild in the woods like other trees;⁴ but its value does not seem fully known to the inhabitants of the country. It is met with in greatest quantity on the west side of the great river *Mavela-gonga*, where, in many places, it is as common as the hazel-bush in England. The trees are of a middle size. The cinnamon is the rind or bark, which, so long as it is on the tree, has a white appearance. It is scraped or peeled off, and dried in the sun; it is commonly taken only from the smaller trees, though the bark of the larger ones has an equally pleasant and pungent taste. The wood is without odour, has a white colour, and is as soft as fir. It is used for a variety of purposes, the tree being cut down as freely as any other in the forest. The leaves resemble in colour and thickness those of the laurel, with this difference, that the latter have only one vein, while those of the cinnamon-tree have three. The young leaves, when they first sprout, are of a scarlet-red, and, if rubbed or torn, yield an odour more like that of cloves than of cinnamon. The tree bears a fruit which ripens in the month of June, and has the appearance of an acorn, but is somewhat smaller.

⁴ Voyage to Ceylon, p. 32, of the German Translation.

It has neither the taste nor smell of the bark, but, when boiled in water, it yields an oil which, when cold, is as hard and white as tallow, and has an agreeable perfume. It is used as an ointment for wounds and sores, and is also burnt in lamps; but no candles are made of it, except for the service of the king. Yet it is stated by *Tavernier*,⁵ that while the Portuguese were in possession of the island, this oily material was employed by them in the manufacture of candles. His words are, "on the cinnamon-tree grows a fruit like an olive, which is not, however, eaten. When a quantity is collected, they are boiled (along with some of the twigs pulled from the ends of the branches) until the water evaporates. On the materials cooling, there is found on the top a kind of paste like white wax, and camphire at the bottom. Of this paste candles are made, which are used in the churches, and give out, as soon as lighted, a strong smell of cinnamon." *Tavernier* further remarks, that the tree has three different rinds, but it is only the outermost and second that are pulled, the third being often left untouched. This is confirmed by *Wolf*,⁶ who adds, that the growth of the tree is by no means uniform, but depends very much upon the soil. If time is allowed, it attains a considerable size; but the larger the stem, the less valuable the bark; and, indeed, the rind of the largest trees is used only for the distillation of the oil of cinnamon. The Hebrews received this Indian production, like several

⁵ *Voyages*, Part II. Book I. chap. 12.

⁶ *Voyage to Ceylon*, p. 86.

others, through the Midianites and Nabathæans, who brought it from the Arabian Gulf.

[The above account being somewhat antiquated, we present the following more recent statement, drawn from the writings of the brothers *Nees van Esenbeck*, which are referred to in a note to the last article "*Cassia*." The *Cinnamomum Zeylanicum* of Blume is indigenous only to Ceylon, though the culture has spread to Java, and some parts of South America. It abounds most in the south-western district of the island; and those trees are supposed to furnish the best cinnamon which grow on a sandy soil. From May to October is the season for gathering the bark. After being separated from the tree, it is tied up in bundles for twenty-four hours, during which time a kind of fermentation ensues, which facilitates the removal of the outer bark from the cuticle and epidermis. It is then rolled up into quills or pipes about three feet long; the smaller quills being surrounded with larger ones,—*a mark which is said always to distinguish cinnamon from cassia*. It is then taken to Colombo, where it is sorted by government inspectors into three kinds, of which the two first alone are commonly sent to Europe. It is formed into bales of upwards of ninety pound weight, containing some pepper or coffee, and wrapped in double cloths, which are made, not of the cocoa-tree, (as some assert), but of hemp. The pieces are about three feet four inches in length, containing from six to eight rolls in each, of the thickness of vellum, the colour a dull golden yellow, and the surface smooth on both sides. Its analysis, by *Vauquelin*, yielded volatile

oil, a large quantity of *tannin*, an azotized colouring matter, a peculiar acid, mucilage, and feculum. The inferior kind of bark is generally reserved to be distilled, along with the broken pieces of the other two, for the purpose of obtaining the oil of cinnamon.—*Tr.*]

22. *Rimmon*,¹ the *Pomegranate-tree*.²

That the Hebrew word denotes the pomegranate-tree and its fruit, is proved by the concurrent testimony of the ancient translators, as well as by the Arabic name of that tree,³ which has a similar sound. The pomegranate-tree grows to no great height, and send forth a number of sprouts from the same root. The boughs are very thick, and armed with thorns. The leaves resemble those of the olive and myrtle, and hang on red stalks. The flowers, which stand isolated, are large, of a stellated form and blood-red colour. They grow into a delicious fruit, which is of a globular shape, and of the size of an apple. It is surmounted with a small round knob two or three inches in circumference. The interior is of a yellow colour, is divided into nine or ten compartments, and contains a number of purple seeds, with a juice or liquor of an acid sweetness. The pomegranate-tree is common in all the gardens of Syria, especially about Aleppo. The ripe fruit is seldom found in

¹ רימון.

² *Malus punica*; *malus granata*. *Celsius*, P. I. p. 271.

³ رمان.

abundance before the end of August, when most families lay in a store of it for winter. There are three varieties of this fruit: one is sweet, another very sour, and the third has an agreeable mixture of both tastes combined. The juice of the sour pomegranate is used instead of vinegar. The fruits of the two other varieties are sometimes served up at table along with sugar and rose-water. The kernels likewise, (both fresh and dried) form an important article of cookery.⁴

As the pomegranate-tree flourishes in the south of Europe in the open air, we may naturally look for it in Syria and Palestine, where it was indigenous from the earliest times. Moses mentions it among the fruit-trees of Canaan in Deut. viii. 8. Several towns or villages in that country bore the name of *Rimmon*, which was probably given them from the circumstance that the environs abounded in pomegranates. Thus we read of a *Rimmon* in the tribe of Judah. Josh. xv. 32; in the tribe of Benjamin, 1 Sam. xiv. 2; in the tribe of Zabulon, 1 Chron. vii. 77; of a *Gath-Rimmon*, i. e. "the treading-press of pomegranates;" in the tribe of Manasseh, Josh. xxi. 25; and in the tribe of Dan, Josh. xix. 55. Saul dwelt at the extremity of the city of Gibeah, under a pomegranate-tree,⁵ 1 Sam. xiv. 2. The prophet Joel

⁴ *Russell's Nat. Hist. of Aleppo.* Part I. p. 107 of the German translation.

⁵ Yet the Syrian idol *Rimmon*, (2 Kings v. 18.) did not receive his name from the pomegranate, as some have conjectured; but the word denotes "the exalted one," from רַמַּן "to be high or exalted."

complains (ch. i. 12,) that the locusts had destroyed the pomegranate-trees; and Haggai, (ch. ii. 19,) that in a season of barrenness the pomegranate-tree had also failed. In the Song of Solomon (ch. iv. 13,) mention is made of a "garden of pomegranates."

That Egypt likewise abounded in this fruit is evident from the complaint of the Israelites in Numb. xx. 5, that Moses had led them out into a wilderness where there were neither "vines nor pomegranate-trees," to which they had been accustomed when in Egypt. *Abdollatif*⁶ says, the Egyptian pomegranates are excellent, though not without something acid in their sweetness. *Sonnini*⁷ saw the tree in the orchards around Denderah; but the pomegranates sent him as a present by the Emir of Denderah were not so savoury as he expected. In the Song of Solomon, (ch. iv. 3,) the colour of the pomegranate is alluded to as descriptive of a beautiful complexion—"thy cheeks* are like a piece, (or section), of the pomegranate-apple within thy locks." That pomegranates were pressed for the sake of obtaining *must*, appears from the Song of Solomon, (ch. viii. 2,) where, along with spiced wine, mention is made of the "juice of the pomegranate." *Philostratus* says,⁸ in one of his letters, that at Erythræ, in Ionia, pome-

⁶ Hist of Egypt, p. 57 of the Arabic text, edited by *White*, in *De Sacy's* French translation, p. 36.

⁷ Voyage, Part II. p. 267 and 279 of the German translation.

* The English version has improperly "temples."

⁸ In *Diodorus*, p. 836.

granate-trees were raised, which yielded a kind of vinous liquor, which was used for drink. *Dioscorides* remarks,⁹ that the pomegranate wine was pressed out of the ripe fruit, after the kernel had been abstracted, but that it was not fit for preservation until very much reduced by boiling.

From the beautiful round form of this fruit, it was used as a model for many ornaments both in architecture and dress; *e. g.* in the pillars of Solomon's temple. 1 Kings vii. 18, 20, 42. 2 Kings xxv. 17; and in the fringe of the high-priest's robe. Exod. xxviii. 33, 34.

23. *Shittah*,¹ the *Acacia-Tree*.²

The boards, and part of the furniture of the tabernacle in the wilderness, were made of *shittah-wood*. Exod. xxv. 5, 10, 13, 23, 28; xxvi. 20, 32, 33; xxvii. 1, 6; xxx. 5; xxxv. 7, 24. Deut. x. 3. The Hebrew name, which is properly *Shintah*,³ was formed from the Egyptian word *Shont*, which the Arabs

⁹ Book V. Chap. xxxiv. *περὶ ῥοίτου οἴνου.*

¹ שִׁטָּה.

² *Acacia*, *Mimosa spinis geminatis*; *Celsius*, P. I. p. 498.

³ For the sake of euphony, and an easier pronunciation, the double t was substituted for the nt; as שִׁטָּה for חֲנִטָּה which is preserved in Arabic; בַּת for בִּנְתַּי in Arabic

بنت.

pronounce *Sont*.⁴ It literally signifies “thorns,” but denotes specially the Egyptian acacia, the only tree in the Arabian desert from the wood of which boards could have been made. This tree commonly attains the height and strength of the willow; it sometimes is as large as a walnut-tree, and has wide spreading branches. The stem is very straight, and is armed (as well as the boughs) with prickly thorns, which commonly grow two or three together. The bark is of a greyish black, the wood yellowish, the leaves small, and shaped like a lentil. It bears pods like those of the lupin, and of a blackish brown colour; the interior is divided into compartments, in which the seeds are deposited. It is from this tree that gum Arabic is obtained. The wood is not only very durable, and not liable to injury from water,⁵ but is also extremely light; and hence it was admirably adapted for a moveable and portable structure like the Mosaic tabernacle.

“On the arid and almost barren plains of Upper Egypt,” says Sonnini,⁶ “grows the acacia-tree, from the trunk and branches of which the gum Arabic distills. The stem is crooked, and of no great height;⁷ the boughs are long and not nume-

ο δ
⁴ *βιν*. For remarks on the Egyptian word see *Jablonski's Opuscula*, P. I. p. 260.

⁵ Hence the Septuagint has rendered the Hebrew word by ξύλα ἀσηπτα, *i. e.* “wood not subject to rot, incorruptible.”

⁶ *Voyages*, Part II. p. 329 of the German translation.

⁷ This is true only of the trees *Sonnini* saw in the Thebaïde in Upper Egypt; for *Abdollatif* (*Hist of Egypt*, p. 50 of the

rous;* the leaves being both few and small, give it a very naked look; the bark is rough and of a dark brown colour. The long white thorns⁸ impart to it somewhat of the appearance of a tree that has been killed by frost. It bears a very small white or yellow flower, almost destitute of smell. This tree, which the Egyptians call *sunt* or *sant*, is not reckoned among those planted for ornament, on account of its poor foliage; yet it is highly valued for its useful properties. The wood, which is of a dark red colour, is hard, and is susceptible of a fine polish.⁹ The kernel of its fruit (which lies in a pod,) yields a

Oxford edition,) calls *Sont* شجر عظام جدا. "A very large tree." A little after he quotes from *Dinuri's* work on plants, that "it is a tree of the size of a walnut-tree,"

شجر عظام كَشَجَرِ الْجَوْزِ. This is also the remark of *Eugene Roger* in the *Descript. de la Terre Sainte*, p. 17. Cet arbre est quasi aussi grand comme un noyer. *Wesseling* says, in his notes on *Prosper Alpinus*, de *Plantis Aeg.* p. 8. Caudicem non raro ampliorem deprehendi, quam ut brachio meo circumdari potuerit. *Hasselquist* says, (p. 514 of the German translation) *Mimosa Nilotica arbor ingens ramosissima, gummosa.*

* *Abulfadli* says, (in *Celsius*, p. 503,) that the branches and twigs bend down and do not stand upright.

⁸ *Abdollahif* loc. cit.. له شوك كثير حديد صلب ابيض. It has many sharp, hard, white thorns."

⁹ *Dinuri*, (in *Abdollahif*,) says, the wood of this tree has the hardness of iron; and, when long kept, becomes as black as ebony. The same is remarked by *Abulfadli*, in *Celsius*, loc. cit.

red colour, which is used in the dyeing of leather. Goats are very fond of the fruit, which the Arabs call *Karat*.¹⁰ When pulled before it is ripe, an astringent medicine¹¹ is prepared from it. But a still more important article of manufacture and trade is the gum, which flows from the numerous cracks in the bark, or from incisions made in the stem, or in the larger branches.”

24. *Shikmah*,¹ the Wild Fig-tree, or the Sycamore-tree.²

Wherever the Hebrew word occurs, the Alexan-

¹⁰ ^وقرظ, Kart. According to *Abdollatif*, it is only the leaves of the tree that are so called; but *Abulfadli* uses this name of the tree itself. *Hasselquist*, incorrectly, writes the word *Charad*; nor is *Forskäl* right when, in his *Flora Ægypt. Arab.* (p. LVI. LXXVII. and CXXIII.) he writes قرظ.

¹¹ See an account of the mode of preparing this medicine in *Abdollatif*; with which compare the notes of *Des Sacy*, in his French translation, p. 122.


¹ שִׁקְמָה. Yet the singular nowhere occurs, and the feminine plural termination only once (Ps. lxxviii. 47.) In all the other passages, 1 Kings x. 27. 1 Chron. xxvii. 28. 2 Chron. i. 15. Isa. ix. 10. Amos vii. 4, it is שִׁקְמָה.

² *Sycomorus*. Celsius, Part I. p. 310, sqq. [It is compounded of *σῦκον*, a fig, and *μοῖσα*, a mulberry-tree, resembling the former in its fruit, and the latter in its leaf. Hence too the Germans call it the *Maulbeerfeigenbaum*, q. d. The mulberry-fig-tree.—*Tr.*]

drian Greek translator renders it by *Sykaminon*,³ and the Arabic by *Djommais*,⁴ the name which in Egypt and Palestine still designates the wild fig-tree, or sycamore. It belongs to the family of fig-trees, but in outward appearance resembles more the white mulberry-tree. The stem has the size and circumference of an elm, or a full-grown walnut-tree; the branches are wide-spreading, and cover a large space with their shadow.* The leaves are heart-shaped, downy beneath, and have a pleasant smell. This tree bears its fruit in a manner quite different from other trees. It has it on the trunk itself, which puts forth little sprigs in the form of grape stalks, at the end of which grow the figs close to one another, almost like clusters of grapes. The tree is always green, and bears fruit several times in the year, without observing any certain seasons. *Norden*⁵ saw some

³ *Συκάμινον*. This word, indeed, denotes properly the mulberry tree, but it is also used of the sycamore. *Dioscorides*, Book I. Chap. 182. *Συκόμορον, ἔνιοι δὲ καὶ τοῦτο συκάμινον λέγουσι*. [Yet, may there not be a distinction between the *συκάμινος* of Luke xvii. 6, and the *συκομοραία* of Luke xix. 4. The former may be a species of mulberry, and the latter the sycamore. See *Wolfius* on Luke xvii. 6.—*Tr.*]

سوس

⁴  See *Abulfadli* in *Celsius*, loc. cit. p. 311. Comp. *Abdolatif*, Book I. Chap. 2, p. 21 of the Arabic text, and p. 9 of the French translation.

* *Hasselquist* says, (p. 537): *Umbram praebet egregiam arbor vasta ramosa et in latum extensa, qua incolis terrarum, sub fervido sitarum caelo, insignem praestat usum.*

⁵ *Voyage d'Egypte et de Nubie*. Tom I. p. 85 of the

sycamores that gave fruit two months after others. The fruit has the figure and smell of real figs, but is inferior to them in taste, having a luscious disagreeable sweetness.⁶ Its colour is yellow inclining to an ochre, with flesh-coloured streaks. In the inside it resembles the common fig, except that it has a blackish colour with yellow spots. The wood of this tree is very strong and durable, for it suffers neither from the sun nor from water. Hence it is used in the construction of doors and the larger articles of house-furniture. The ancient Egyptians made of this wood the coffins for their mummies, and they remain sound to this day.⁷ It is to the employment of this wood in building that the prophet Isaiah refers, when, (in ch. ix. 10,) he represents the presumptuous Israelites as saying, "The sycamores are fallen, but we will change them into cedars," *i. e.* in place of common houses, built of the wild fig-tree, we will erect palaces of cedar. That sycamores abounded in Palestine, especially in the plain along

Edit. of Langlès. There is a figure of the tree on Plate XXXVIII.

⁶ *Abdolatif* says, (loc. cit.) that the fruit is sweeter than the fig, but has a taste of the wood. According to *Olivier*, (*Voyages*, Tom. III. p. 305), the fruit is unwholesome. Ses fruits sont mal-sains et ont un goût fade, peu agréable. *Hasselquist*, on the other hand, (p. 5), thought its fruit had a very pleasant taste. Fructus gustui satis gratus est, dum bene maturus, mollis, parum aquosus, dulcis, cum minima portione saporis aromatici: ego ab ejus esu, dum primum gustavi, non nisi difficulter me retinere potui; et, si sanum satis recentem illum credidissem, insignem copiam devorare cupidus fuissem.

⁷ *Abdollatif*, loc. cit. *Hasselquist*, p. 537.

the Mediteranean,⁸ appears from the circumstance, that in 1 Kings x. 27; 2 Chron i. 15, it is said, that in the time of Solomon, cedars were as common in Judea as "sycamores in the vale." David appointed a special overseer for sycamores, as for olive trees; 1 Chron. xxvii. 28. In Ps. lxxviii. 47, it is said that the sycamores of Egypt were destroyed by hail.* The tree is still common in Egypt, being planted near the houses, for the sake of its ample shade.⁹

The prophet Amos says, (ch. vii. 14,) that he was no prophet nor prophet's son, but a herdsman "who cut or pared wild figs;"¹⁰ for *Theophrastus*¹¹ informs us that "the fruit must be cut or scratched, either with the nail or with iron, otherwise it will not ripen, but that four days after that process it becomes ripe." *Abdollatif*¹² says: "Some days before the figs are pulled, a man ascends the tree with a pointed piece of iron, and pierces the fruit. There flows from the small puncture a kind of milk of a white colour, and the place then becomes black. It is by this process the fruit acquires a sweet taste."¹²

⁸ הַשְּׁפֵלָה, Shefelah. See *Rosenmuller's* Geography, Vol. II. Part. I. p. 151, 288; and Part II. p. 322.

* In the English version, it is "by frost."

⁹ *Belon*, Observations. Liv. II. ch. 37 and 78. *Olivier*, loc. cit. Com. the note * at p. 289, above.

¹⁰ בּוֹלֵם שְׁקָמִים.

¹¹ *Hist. Plant.* Book IV. cap. 2.

¹² At p. 21 of the Arabic Text.

¹³ *Forskäl*, *Flora Ægypt. Arab.* p. 182. Cum fructus ad magnitudinem pervenit diametri pollicis, solent incolae ad un-

The sycamore is one of the highest trees that grow in Palestine.¹⁴ It was into one of them that Zaccheus climbed in order to obtain a sight of Jesus as he passed by. Luke xix. 4.

25. *Teēnah*,¹ the Fig Tree.²

That the above Hebrew word designates the fig tree can admit of no doubt, since it is so translated in all the ancient versions, and the Arabic and Syriac names are very similar.³ The fig tree is enumerated among the valuable fruit trees of Palestine, Deut. viii. 8; and figs were among the fruits which the spies, who were sent from the wilderness of Paran, brought back as specimens of the productiveness of the land, Num. xiii. 23. The tree is not there reared in gardens as in Europe, but grows

bilicum ejus partem resecare, qui locus deinde nigrescit. Sine hac circumcissione maturitatem non obtineri ajunt. Cultros habent, ad hoc artificium factos, apice rotundatos, et ab una parte acutos. Si ficus aliquae praetereuntur, et sectionem non subeunt, cynipe plenae evadunt versus tempus inundationis Nili. Quicquid sit, in his arte maturatis ficibus nulla vidi semina. Comp. *Warnekros* Historia Naturalis sycomori in Eichhorn's Repertor. for Bibl. and Orient. Literat. Part XI. p. 224, sqq. and Part XII. p. 81, sqq.

¹⁴ *Leo Africanus*, in his Description of Africa, (p. 773,) calls them, "proceras et altissimas."

תאנה.

² Ficus, Celsius Part II. p. 368.

³ تين. لـ | دـ |

spontaneously in the open country. It has a smooth stem, which is seldom quite straight, and is covered with a grey bark; the branches afford a light and pleasant shade. The leaves are of the shape of a heart, with three or five lobes, and are indented; the upper side is rough, the lower is covered with fine hair. The flowers lie concealed within a hollow fleshy receptacle, and hence the ancients were led to entertain the notion that the fruit did not proceed from any flower.* There are *three* descriptions of

* See *Celsius* loc. cit. p. 394, et seqq. The Fig-tree is *diœcious*, having the male flowers on one tree, and the female or fruiting ones on another. The former, which is also called the "black or wild fig-tree," is the *Caprificus* of the ancients, (*Pliny*, Book XV. chap. 19.) An insect of the gnat species, (*Culex*), breeds in the male tree, and, being covered with the pollen of the male flowers, impregnates with it the stigma of the female tree, whither it repairs in order to deposit its eggs. [The author seems here to confound the *caprification* of the fig-tree, (viz. the maturing of its fruit by the bites of insects or the puncture of a needle or awl,) with what is sometimes called, though with manifest impropriety, the *caprification* of the palm-tree. It is at least to the former practice alone that *Tournefort* refers, who is the chief authority relied on by the author, and who, besides the notice he took of the operation in his travels, wrote a memoir on the subject, which was communicated to the Academy of Sciences in 1705. The insect, by means of which the ripening of the fig is hastened, is the *Cynips Psemes* or *Diplolepis Ficus Caricæ*,—a figure of which was given in the *Linnæa* for 1823, p. 70, Tab. I.—*Tr.*] The peasants are in the habit of taking the fruit of the male tree, (where that insect breeds,) and suspending it on the female tree, from the belief that without this *caprification* the female fruit would not fully ripen. But this is a mistake, for, on the

fruit, which the tree bears almost throughout the whole year,⁴ but at different periods: 1st, The *Early Fig*, called, when unripe, *Pag*,⁵ when ripe, *Biccurah*.⁶ It begins to appear about the time of the vernal equinox, and is fully ripe about the middle or end of June. In the Song of Solomon, (chap. ii. 13),

contrary, the figs are more savoury without this process. It has been found, however, that without the intervention of the insect, the female fruit is not so large, and has unfruitful seed, though the latter circumstance is of less consequence, as the tree is commonly propagated much better by slips than by seed. [Dr. Russell says, in his Natural History of Aleppo, Vol. I. 86, "I have heard that the Aleppo gardeners, in imitation of this operation of the gnat, sometimes pinch a few figs with a needle dipped in oil, in order to have early figs for presents to great men. But the manner of conducting this process in the Archipelago, as described by Tournefort, is little known at Aleppo, and is so little suited to the natural indolence of the people, that, were such labour absolutely requisite, they probably would sooner give up the fruit than take so much pains to procure it."—*Tr.*] Comp. *Tournefort's*, *Voyages dans le Levant Lettre 1. Tom. II. of the octavo edition*, [Eng. Translation p. 20]; and *Hasselquist*, p. 221, of the German Translation.

⁴ *Josephus* mentions, (*Jewish War*, Book III. chap. 10, § 3,) that along the Lake of Gennesareth, figs and grapes were produced for ten successive months without intermission.

⁵ פג.

⁶ בבורה. In Arabic, بـكـور and بـكـيرة denote "any kind of early fruit." In the north of Africa the early figs are called *Boccore*, (*Shaw's Travels*, p. 296), or بـكـور, *Bucor*. See *Höst's Account of Fez and Morocco*, p. 304.

it is mentioned as one of the tokens of the arrival of spring, that the fig tree “seasons its unripe figs,” *i. e.* that they begin to acquire a flavour and to ripen. The ripe early fig, being the first kind of fruit in the year, was reckoned a great dainty. Hence, in Isa. xxviii. 4, the quickly fading glory of Ephraim is compared to “an early fig before the harvest;” [in the English version it is, “the hasty fruit before the summer,”] which one sees, and it is scarcely in his hand when he swallows it up. The prophet Jeremiah saw in a vision, (chap. xxiv. 2), “a basket of figs, which were very good, like early figs.”⁷ As soon as they are ripe, they fall off the tree; and, as the prophet Nahum says, (ch. iii. 12), “if they be but shaken they fall into the mouth.” 2d, The *Summer-Fig, Karmuse*,⁸ shews itself in the middle of June, when the early fig is ripe; but does not itself ripen until August. 3d, *The Winter-Fig* appears in August, when the last mentioned is ripe, and it ripens late in the autumn, when the tree has lost its foliage. In mild winters, fruit is found on the tree even in the month of January. This kind of fig is larger than the former, of an oblong shape and violet colour.⁹

Figs were not only eaten when fresh, but seem, from the earliest times, to have been much relished

⁷ תַּאֲנִים טְבוֹת מְאֹד כְּתֵאִי הַפְּרוֹת.

⁸ كرموص. *Shaw and Höst, loc. cit.*

⁹ *Shaw, loc. cit.*

as an article of food when preserved. On this point we have the express testimony of *Athenæus*¹⁰, who says, “dried figs have been, at all times, so highly esteemed, (for, indeed, as Aristophanes truly observes, ‘nothing is so sweet as dry figs,’) that we are informed, by Hegesander, that Amitrochades, an Indian king, begged Antiochus, in a letter, to send him at his own expense, ‘sweet wine, dried figs, and a sophist.’” Hence the ancients were in the habit of preserving them in great quantities, both for home consumpt and for exportation.¹¹ There were two modes of preservation: either by pressing a number of fresh figs so closely together that they formed one adhesive lump, or by pounding them into a mass of uniform consistency; and, in both cases, they were formed into cakes. These were made sometimes round, sometimes square, and sometimes of the shape of bricks.¹² They were

¹⁰ Deipnosoph. Book XIV. p. 652.

¹¹ The Greeks called them *ισχάδας*, the Romans *caricas*. See *Celsius*, Part II. p. 379. The Hebrew word כִּיֹּבֵד would seem to signify “dried figs,” 2 Sam. xvi. 1. Jerem. xl. 10, 12. Amos viii. 1, 2. See *J. E. Faber's* Remarks on the Observations on the East, Part I. p. 387, et seqq.

¹² Both kinds of these fig-cakes were called by the Greeks *παλάθας*. *St. Jerome* says, in his Commentary on Hosea i. 3, *παλάθη* massa ficuum et pinguium caricarum, quas in modum laterum figurant, ut diu illaesae permaneant, calcant atque compingunt. See also *Hesychius* and *Suidas* under *παλάθη*. As to the different forms of these cakes, and the method of preparing them, *Celsius*, (loc. cit. p. 377), and *J. E. Faber*, (loc. cit. p. 391), have collected several passages from the Talmud.

called in Hebrew *Debelim*,¹³ and are several times mentioned in the Old Testament. 1 Sam. xxv. 18; xxx. 12. 2 Kings xx. 7. 1 Chron. xii. 40. Isa. xxxviii. 2.

The Evangelist Matthew mentions, (in ch. xxi. 19,) that, when Jesus was on his way from Bethany to Jerusalem, not long before his last sufferings, he saw a fig-tree covered with foliage, and went near, expecting to find on it some fruit wherewith he might appease his hunger. But, on finding nothing but leaves, he said; "Let no fruit grow on thee henceforward for ever;" and presently the fig-tree withered away. The Evangelist Mark adds the observation—(ch. xi. 13,) "for the time of figs was not yet come."¹⁴ The meaning of that obviously is, that as the tree was clothed with foliage, and did not seem to be in an unhealthy condition, it might have been

¹³ דְּבֵלִים in the singular דְּבֵלָה from דָּבַל, in Arabic دَبَل, "to thicken any thing," and specially "to bring into a round form."

¹⁴ Οὐδὲν εὗρεν εἰ μὴ φύλλα· οὐ γὰρ ἦν καιρὸς σύκων. Some critics have thought it singular, that Jesus should have expected fruit on the tree before the season of figs had arrived. They therefore propose to expunge the οὐ, "not," which is sanctioned, however, by the best critical authorities, and is indeed necessary to the sense. For, if Jesus had come seeking figs, after the fig season had fully commenced, and found only leaves, there might have been ground for supposing that the fruit had already been pulled. But when there was not even the appearance of fruit, at a time when it ought to have been ripening, and yet the tree was covered with leaves, it was natural to conclude that the tree was utterly barren.

expected to have by that time exhibited some show of fruit ; and though the season of *ripe figs* had not yet arrived, yet it was reasonable to look for some *early figs*. But as the tree bore no kind of fruit whatever, Jesus condemned it as altogether useless. That this fig-tree was intended to be an emblem of the Jewish nation appears probable from the circumstance, that in another parable, recorded in St. Luke's gospel, (ch. xiii. 6—9,) the Saviour compares that people to a fig-tree, whose proprietor had for three years sought fruit from it in vain, and therefore gave orders to the gardener to cut it down, but at his earnest entreaty spared it yet another year. The Arabs, according to *Ibn El-Wardi*,¹⁵ deal in a similar way with the palm-tree. To cure the barrenness of the palm, the owner, taking a hatchet, went to the tree accompanied by a friend, and said, " This palm-tree must be cut down for it is barren." Then his friend said, " Do not cut it down, for it will certainly bear fruit this year." But the owner persisting, said, " It must by all means be cut down ;" and thereupon struck it three blows with the back of the hatchet. Then his friend interposing, said, " I beseech you not to do it, for certainly it will bear fruit this year ; have patience with it, and do not destroy it so hastily ; if it should bear no fruit, then you may cut it down."

In Gen. iii. 7, our first parents, on their expulsion

¹⁵ In the fragment of his Cosmographical work, which *Charles Aurivillius* published in Arabic and Latin, in the Dissertations of that learned Swede, edited by *J. D. Michaelis*, [Göttingen, 1770], p. 56.

from paradise, are said to have made to themselves aprons of "fig-leaves." Some commentators suppose, that as the leaves of the common fig-tree are not adapted for such a purpose, we are to understand the reference to be to the large leaves of the *Pisang* or *Paradise fig-tree*,¹⁶ which are several ells long, and proportionally broad. But not to mention the objection of that tree being peculiar to India,¹⁷ and, therefore, not likely to be familiarly known by the Hebrew historian, there is no reason for supposing that any tree but the common fig-tree was in-

¹⁶ *Musa Paradisaica*. The first of these words is derived from the Arabic name of this tree *موز*, (*Maus, Mus*). A description of it is given by *Abdollatif*, p. 36 of the Arabic text. There are several species, for which see *Wahl's* Geography of the East Indies. Part II. p. 784, et sqq. Pliny describes two kinds in Book XII. chap. 6. Of the first he says: Major alia; pomo et suavitate praecellentior, quo sapientes Indorum vivunt; folium alas avium imitatur, longitudine trium cubitorum, latitudine duum. *Rauwolf* describes a *musa* or *pisang* tree, which he saw at Tripoli in Syria, among other foreign trees which were there reared. Travels, Part I. chap. 4, p. 60. He says the leaves were so long and broad that a full grown person might lie upon one of them at his length. Leo Africanus, says in his *Descript. Africae*, L. IX. Cap. 64: Ferunt Mahometani doctores, hujus fructus (*Musae*) comestionem Deum primis parentibus interdixisse, quem ubi comedissent, verenda ejus fructus foliis, ad hoc inter plantas reliquas aptissimis, operuisse.

¹⁷ It is indeed found also in Syria and Egypt, but it is as a foreign tree, cultivated by art. *Sonnini* says: (*Travels*, Part I. p. 261 of the Ger. Transl.), "These trees are not indigenous to Egypt, but have to be planted there. They are found only in the northern parts of the country, for they are not to be seen about Cairo.

tended ; for it is expressly said, that the leaves were “ sewed or bound together,”¹⁸ which is not so applicable to large leaves as to those of a moderate size.

6. *Teashur*,¹ the *Box Tree*.²

Among the trees of Lebanon, which are enumerated in Isa. lx. 13, as furnishing wood for the erection of the future temple at Jerusalem, mention is made of the *Teashur* ; and, in Isa. xli. 19, the same tree is spoken of in connection with the cedar, the cypress, and the acacia, (or shittah tree), as one day to be seen springing up and flourishing in dry, barren, and unsheltered wilds. According to the Jewish commentators, the *Teashur* means the box tree ;* an interpretation which is not unsuitable to either of the passages where the word occurs. The box tree, with its high and straight³ stem, its shining ever-green leaves, and its numerous branches, would,

¹⁸ וַיִּתְּפְרוּ עָלֶיהָ תְּאֵנָה וַיַּעֲשׂוּ לָהֶם חֲגָלוֹת

¹ תְּאֵשׁוּר,

² *Buxus*, Celsius, Part II. p. 153.

* They believe that the Hebrew תְּאֵשׁוּר is represented

by the Chaldee אֲשַׁבְרַע which is used by the paraphrast Jonathan in Isa. xli. 19. See on that Chaldee term *Landau's* Remarks on the “ Aruch,” or Rabbin. Aram. Germ. Dictionary, (Prague, 1820,) Part I. p. 216.

³ Looking to the root אֲשַׁר to be straight תְּאֵשׁוּר seems to denote “ a tree with a straight stem.”

with the other trees mentioned in Isa. xii. 19, be well adapted for the ornament of extensive plains. And, in reference to Isa. lx. 13, it may be remarked, that the wood of this tree is admirably suited for building, on account of its hardness and durability. On the other hand, it must be admitted, that it cannot be shewn on philological grounds, either from the cognate dialects or the ancient versions, that Teashur does mean the box tree. Saadias, and the Syriac translator, explain the Hebrew word by *Sherbin*,** the name of a species of cedar or cedar-fir. Niebuhr was told by Dr. Russell at Aleppo, that the proper name of the cedar was *Sherbin*. The same writer heard at Copenhagen, from a native Arab, Abud Ibn Shedid, that the tree called *Arz*, (see above at p. 246), bears large, and the tree *Sherbin* small fruit. The boughs of the former are small, and form a right angle with the stem; the latter has large branches shooting forth in oblique directions. He had seen many *Sherbin trees* in the territory of Hanover. Both the *Arz* and the *Sherbin* are used for building in the region of Lebanon; but the wood of the former is the most lasting.†

The prophet Ezekiel says, (Ch. xxvii. 6,) in his description of the commerce and luxury of ancient Tyre, that the rowers' benches of their ships were constructed of *ashur-wood*, from the islands of

** شربين

† Descript. of Arabia p. 149.

Greece, inlaid with ivory.⁴ Now *ashur* is only an abbreviated form of *teashur*; and, according to the traditional interpretation of the Jews, it denotes the same thing, viz. *box-wood*. Virgil, too, speaks of “box-wood, inlaid with ivory;”⁵ and among the Greek islands, whence the Syrians received their *ashur-wood*, the island of Corsica seems, (according to the probable conjecture of Bochart,⁶) to be especially intended, since it was famous for producing the finest box trees.⁷

27. *Tidhar*¹

Is mentioned in Isa. lx. 13, as a tree of Lebanon, and is explained by the Alexandrian Greek translator as meaning a pine-tree.² In the other place, (Isa. xli. 19,) where this tree is introduced between the *Berosch* and the *Teashur*, (see p. 257 and p. 292,) the second clause of the verse seems to have been omitted in the Septuagint. But, as the pine-

קְרִישׁ עֲשׂוּ יֵשׁן בְּתֵּי אֲשׁוּרִים מֵאֵי פִתִּים

See *Rosenmuller's* Scholia in loc. [The English version of Ezek. xxvii. 6, is, “the company of the Ashurites have made thy benches of ivory, brought out of the isles of Chittim;” but in the margin there is “they have made the hatches of ivory well trodden.”

⁴ *Æneid*, Book X. v. 137. Quale per artem inclusum buxo lucet ebur.

⁶ *Geograph. Sac.* Part I. Lib. III. Cap. 5, 180.

⁷ *Pliny*, Lib. XVI. Cap 16. *Buxus crassissima* in Corsica. *Theophrast.* *Hist. Plant.* Book III. Chap. 15.

¹ תִּדְהָר.

² Πεύκη.

tree certainly grew on Lebanon,³ it is quite possible that it is the tree designated by the name *Tidhar*.⁴ The Chaldee translator interprets the Hebrew word by the Chaldee term *Murneyan*,⁵ which is commonly rendered "the elm," although there is no certain evidence for the correctness of that interpretation. *Gesenius* conjectures⁶ that *Tidhar* denotes "a durable tree;"⁷ or at least one that yields durable wood,

³ See *Celsius*, P. II. p. 273, where he gives, from the statements of travellers, an account of the trees that grow on Lebanon.

⁴ *Vitringa*, in his Comment. on Isa. xlv. 11, and *J. Chr. Biel*, in his *Exercitatio de lignis ex Libano ad templ. Hierosolymitan. aedificand petitis* (p. 8), adopt the opinion that תִּדְהָר denotes the pine, because תִּדְהָר is used instead of תִּזְהָר from זָהָר to light, and that the tree received that name from its resinous wood being used for torches; whence the Greek πύσσιν signifies both a pine-tree and a torch, as is shewn by *Biel* by various extracts.

⁵ מִרְנַיָּא. The corresponding Chaldee word מִרְנַיָּא signifies "a lance;" and the similar Arabic term *مِرْزَانَة* hasta subdura et lenta is also the name of a tree. The root,

مِرْن (مِرْن), signifies levis fuit, et quidem cum aliqua duritie, in-durnit manus ad opus, vel opere, *Golius*, p. 2218.

⁶ Comment. on Isaiah xli. 19, p. 54.

⁷ תִּדְהָר he supposes to be equivalent to תִּדְרָא (Comp. the Chaldee adverb בְּתִדְרָא durable. Dan. vi. 17, 21,) and דְּהָר equivalent to דָּוַר "to turn round in a circle," and thence "to endure."

perhaps a kind of plane-tree. But the trees which produce durable wood are so numerous that it is impossible to determine which of them may be here intended. *Saadias* has, in both places, the Arabic name *Sadj*, which, as we saw above, (at p. 261,) designates the *Juniperus Sabina*, a kind of cypress. As none of the cognate dialects furnish any name that corresponds to the word *Tidhar*, its meaning must remain uncertain.

28. *Tamar*,¹ the *Palm-Tree* or *Date-Palm*.²

The meaning of the Hebrew word *Tamar* has never been called in question. The ancient Greek and the Oriental translators unanimously interpret it by "the palm-tree;" and the corresponding Arabic term³ designates the fruit of that tree *the date*, and especially a kind that is preserved on account of its superior excellence.⁴

The palm differs from all other trees, both in its general appearance and the form of the particular parts. Its roots do not strike deep, nor do they spread far around, and yet it becomes a tall and vigorous tree, attaining the height of our loftiest firs,

¹ תָּמָר.

² Palma, Phoenix dactylifera, Celsius, Part II. p. 44, et seqq.

³ تَمْر.

⁴ The Arabic name of the tree is نَخْلَة; collective نَخْل.

especially when it has a slender stem, for where the trunk is thick, it is proportionally low. It is the practice to lop off yearly the lowermost sprouts, with a view to accelerate the growth; and hence the boughs are all towards the top of the tree. The leaves are of the nature of reeds, and, when the tree has grown to its full size, are six or eight feet long, and, being very broad when spread out, are used for covering the tops of houses and similar purposes. They are attached to short stalks, and in the centre rise erect, but, after they are advanced above the vagina which surrounds them, they expand on every side, and bend towards the ground. On the top there is the germ⁵ of the future boughs, in the form of a pointed cone, nearly two ells in length. The husks, or sheathes containing the flowers, appear in the month of February; they are about an ell long, and

⁵ “ On the very top of the palm tree there is a marrowy substance, which I had an opportunity of examining in a tree that was felled. I ascertained that it is nothing else than the young sprouts of the tree, which afterwards unfold themselves, and grow into boughs and leaves. I can find nothing better to compare it to than the head of an artichoke, only that it is much whiter; it is sweet and pleasant to the taste, and contains a kind of milky sap.” *Mariti's Travels*, p. 407. This substance was called by the ancients the *brain*, (ἰγκίφαλον, cerebrum), of the palm. They prized it as a costly dish, which, however, was thought to produce headache; and they remarked, that whenever this excrescence was cut off, the tree decayed. See *Theophrastus' Hist. Plant.* II. 8. *Xenophon's Anabasis*, III. 16. *Pliny's Nat. Hist.* XIII. 4. *Plutarch's Ἰγυσιὰ*, Cap. 18, Tom. I. P. II. p. 522 of Wytttenbach's Edition.

four fingers broad. The flowers resemble the wild jasmine; but they yield fruit only on the female tree, when its stamina have been fecundated by pollen from the male; and as it is precarious to leave this process to be effected by insects or the wind, it is commonly done by manual labour.⁶ When the female tree has been sufficiently fructified, the dates gradually appear in clusters, the husks dry up, and in August and September the fruit is ripe. In Barbary and Egypt a tree will bear fifteen or twenty bunches, each containing about a hundred dates.* The date, when unripe, has a bitter taste, which it does not altogether lose until fully ripe and dried for preservation, when the taste becomes sweet and pleasant. When spots appear on the fruit it is then known to be mature, and is pulled by persons who ascend the tree, and attach themselves to it by ropes.⁷ The dates are laid on mats, and sorted according to the degree of ripeness. Some are eaten fresh, some are preserved, while others are pressed, in order to yield a syrup, from which the date wine is prepared, that was so much esteemed by the an-

⁶ The manner in which it is effected has been described by *Kämpfer* in the *Amœnitatt. Exott.* p. 707, (comp. p. 694); and by *Hasselquist* in his *Travels*, p. 224, (comp. p. 133.) When the flowers of the male palm unfold themselves, they are filled with a water that resembles the finest dew. It is sweet, and has a pleasant taste, not unlike that of fresh dates, but finer and more aromatic.



* *Shaw's Travels*, p. 127. *Stephen Schulz's Leitungen*, Part IV. p. 355.

⁷ *Kämpfer*, loc. cit. p. 711, et seqq.

cients.⁸ In Egypt, dates are kneaded into large cakes or loaves, which, in the caravan journeys through the desert, serve for food, and, when soaked in water, yield also a refreshing drink. These masses are so hard that they must be broken up with an axe.⁹

But it is not for its fruit alone that the palm tree is so valuable. From the boughs, which are yearly lopped off the lower part of the stem, are made baskets, bird-cages, ropes, and sacks; from the leaves, mattresses, sandals, &c. and in Egypt a kind of hamper for the carriage of rice. The wood indeed is spongy, and has coarse fibres, which adhere but loosely; yet it is very durable, and is used for beams and pillars in the interior of houses. Stephen Schulz found, in the chambers of Egyptian temples, beams of palm wood in a state of good preservation, though they were, at least, three thousand years old.

⁸ *Pliny's Nat. Hist.* XIII. 4, 8. Another mode of procuring palm wine, is mentioned by *Olivier* in his *Voyages*, Tom. III. p. 304. When an incision is made on the upper part of the stem in early spring, there flows a sap of saccharine sweetness, which soon ferments, and yields a kind of wine, that, in a short time, becomes sour. Perhaps the fermentation might be stopped by placing the wine in proper bottles. Comp. *Stephen Schulz*, loc. cit. p. 355. *Mariti*, p. 407. The date

wine is called in Arabic , which corresponds to the Hebrew , a word, however, which denotes any kind of intoxicating liquor.

⁹ *Sonnini's Travels*, Part II. p. 26. *Burckhardt's Travels in Arabia*, p. 30.

Palm trees (of which there is a great variety of species), are commonly found only in the warmer regions of the earth. The date palm, which is the one above described, is indigenous to Arabia, Egypt, and the whole of Southern Asia, from the Indus to the Nile, as also to the north of Africa, as far as Ceuta. It appears to have been more abundant in Palestine formerly than it is now, when the careful cultivation of it is very much neglected.* In early times, Jericho was called the "city of palm trees," Deut. xxxiv. 3. Judges i. 16; iii. 13. About sixty years ago, Mariti¹⁰ found palm trees in that neighbourhood, but they were few in number, and chiefly young shoots, the older trees having been cut down by the Arabs for the building of huts. Among the noble trees, which the threatened swarm of locusts was to destroy, (Joel i. 12), mention is made of the palm tree. At the first celebration of the Feast of Tabernacles by the restored captives under Ezra, palm branches were employed, which were brought from the hills near Jerusalem. Diodorus Siculus says,¹¹ that palms flourish in the country round the Dead Sea, wherever it is irrigated by brooks. Strabo¹² praises the dates of Judea, especially those from the district of Jericho, and prefers them to those of Babylon. Hence, perhaps, the figure of a palm tree

* *Shaw's Travels*, p. 297.

¹⁰ *Travels*, p. 405.

¹¹ II. 48, 53. XIX. 98.

¹² XVI. 41. Comp. XVII. 15, where he says: "With a view to secure to themselves a monopoly of the best dates at a high price, the Jews forbid new palm trees to be planted to any extent."

came to be used upon coins as an emblem of Judæa. Not only are there Roman coins extant with that device, and the inscription "*Judæa Captâ*," but likewise coins of more ancient date, struck in the time of the Asmonæan princes, on which is found the symbol of a palm tree, and sometimes of a bunch of grapes, or a sheaf of wheat.¹³

The palm requires a warm climate, a sandy, but moist and nitrous soil; the growth of newly planted trees is supposed to be promoted by scattering salt for some distance around, but dung, and all kinds of putrefying manure, are held to be injurious.¹⁴ It thrives best in plains where there is no scarcity of rivulets or springs.¹⁵ Thus, the Israelites, in their journey through the desert, found at Elim twelve wells, with seventy palm trees, Exod. xv. 27.

The palm tree is an evergreen; and hence it is employed in Ps. xc. 13, as an emblem of the flourishing condition and durable prosperity of the pious. On account of its tall, straight, and slender stem, the form of a handsome woman is compared to it in the Song of Solomon, (chap. vii. 7); and, indeed, its Hebrew name *Tamar*, became a woman's name of frequent occurrence, *e. g.* Gen. xxxviii. 6. 2 Sam. xiii. 1, 23; xiv. 27.

¹³ See *Fröhlich's Annales Syriæ*. Tab. XVIII. No. 14, 23, 24.

¹⁴ Mariti, p. 400.

¹⁵ *Kämpfer Amœnitt.* p. 677. Ad palmetos condendos diligendi sunt loci irrigui, in quibus affluxus aquæ fontanæ, vel, si ea deficiat, puteanæ per arbores derivari possit. Campus quo planior, eo alendis arboribus aptior natus est.

Palm branches were in use at the Feast of Tabernacles, Levit. xxiii. 40. Neh. viii. 14, 15, 16. They were carried in token of joy at festive processions, 1 Macc. xiii. 51. 2 Maccab. x. 6, 7. John xii. 13. In the public games of Greece, they were presented to the successful competitors as signs of victory; and hence, in the book of Revelation, (chap. vii. 9-14), the martyrs, who appear in triumph before God's throne, are described as having "palms in their hands."

In the above quoted passage in the Song of Solomon, it is said, "This thy stature is like to a palm tree, and thy breasts to clusters, *i. e.* [not "*of grapes,*" as is added in italics in the English Version, but] "*of dates,*" which, as we have already seen, also grow in clusters. The next verse continues: "I said, I will go up to the palm tree, I will take hold of the boughs¹⁶ thereof," viz. with a view to pull the fruit.

¹⁶ אֶחָזָה בְּסִנְסְנִי. The Hebrew word סִנְסְנִים properly signifies *besoms*; but here it is used for the branches of the palm, which, in Levit. xxiii. 40, are called כַּפּוֹת תְּמָרִים. The Greeks also called the palm boughs καλλυνηρία, (See Celsius, Part II. p. 509), and the Septuagint has, in the above cited passage, κάλλυβρα φοινίκων. The upper branches of the palm are still used for besoms and fly-flaps. Pococke's Description of the East, Vol. I. p. 306, and Hasselquist, p. 540. Palm besoms מַכְבַּד שֶׁל תְּמָרִים are mentioned in the Talmudic Tractat Oketzin, Cap. I. § 4. Horace says, (Sat. Lib. II. Sat. IV. 83);

"Ten' lapides varios lutulenta radere palma?"

As the tree has no branches but at the top, and is not easily ascended by a ladder, the inhabitants of Egypt, says Sonnini,¹⁷ pull themselves up by means of ropes.¹⁸

The patriarch Job, in describing the expectation he once had of a long and peaceful life, says, (chap. xxix. 19):

“ Then I said, I shall die in my nest,
I shall multiply my days as the sand.”

This gives a sufficiently congruous sense, inasmuch as the sand was a common figure of speech to express a great multitude. Yet the Jewish expositors have, from very early times, taken the word *chol*¹⁹ here, (usually rendered by “ sand,”) to denote the fabled bird called the Phœnix.²⁰ The tradition bore, that

And *Martial*, (Epigr. L. XIV. 82):

“ In pretio scopas testatur palma fuisse.”

¹⁷ Part II. p. 26.

¹⁸ *Niebuhr*, in a letter to Velthuysen, to be found in a translation by the latter of the Song of Solomon, (Brunswick, 1786), remarks, that to a peasant of Europe, accustomed to climbing from his youth, an ascent to the top of a palm tree would present little or no difficulty; but that it is otherwise with an oriental, who has to raise himself by a laborious process with ropes, one of which is placed in a loop under his feet, and another on a branch of the tree. Comp. *Kämpfer's Amœn. Exott.* p. 710. *Stephen Schulz's Leitungen*, Part. IV. p. 354. *Celsius*, Part II. p. 566, et seqq.

¹⁹ חול.

²⁰ *Kimchi* has remarked, that in the MSS. of the Oriental Recension of the Hebrew text, (viz. that which was executed

after it had lived for five hundred years, it built for itself a funeral pile of sweet wood and the branches of odoriferous trees, to which it set fire by the flapping of its wings, and that, when the whole was consumed, a new phoenix rose out of the ashes.²¹ There is no doubt that this fable took its origin from the great age which is attained by the palm tree, (of which the Greek name is *phœnix*), and from the manner in which it is propagated. "When the palm tree is hewn down," says Mariti,²² "and the trunk burnt, the ashes are of great service in furthering the growth of the young trees, as I have myself often witnessed. The palm, moreover, lives to an extreme age; for, in none of the countries where it grows, have I ever heard of any tree perishing through natural decay."²³

at Nahardea on the Euphrates), instead of חֵיל , *chol*, there is חֵיל , *chul*, which has a different meaning. The root signifies, properly, "to turn round, to turn in a circle," and thence a name might have been derived, intended to be descriptive of the bird that was supposed to be always renewing its life.

²¹ The accounts of the Phoenix differ considerably in different writers. They have been collected by Calmet, in his *Biblical Dissertt.* Vol. VI. p. 164, of the German Translation, with Mosheim's Remarks. [Comp. the Monograph of Anthony Métral, entitled, "Le Phœnix où l'oiseau du Soleil."—*Tr.*]

²² *Travels*, p. 410.

²³ In the passage in Job, the Greek Translator of Alexandria adopted the idea of the palm tree being referred to. His words are: $\eta\ \eta\lambda\iota\kappa\iota\alpha\ \mu\omicron\upsilon\ \gamma\eta\rho\acute{\alpha}\sigma\epsilon\iota\ \acute{\omega}\sigma\pi\epsilon\rho\ \sigma\acute{\tau}\epsilon\lambda\epsilon\chi\omicron\varsigma\ \phi\omicron\iota\iota\kappa\iota\omicron\varsigma,\ \pi\acute{\omicron}\lambda\upsilon\nu\ \chi\rho\acute{\nu}\omicron\nu\ \beta\iota\acute{\omega}\sigma\omega.$ St. Jerome has: *et sicut palma multiplicabo*

Solomon caused pillars and columns, in the temple at Jerusalem, to be erected in the form of palm trees, 1 Kings vi. 29, et seqq.; and such there were also in the Egyptian temples.²⁴ The prophet Jeremiah, when deriding the heathen idols that were carried about in processions, (chap. x. 5), says, that they stood stiff and immoveable, as pillars made like the palm.

29. *Tappuach*¹ the Quince Tree.²

The above Hebrew word is, by the most ancient Greek translators, rendered, “apple,”³ and in this the other ancient versions concur. It is confirmed by the cognate Arabic language, in which the similar word *Taffach*⁴ denotes an apple. Yet, in Scripture, there seems to be a special reference to the sweet-scented *quince apple*, for, in the Song of Solomon, (chap. vii. 8), the breath of the beloved is com-

dies. Comp. *Bochart's Hieroz.* Part II. Lib. VI. Cap. 5, in Tom. III. p. 889 of the Leipzig Edition.

²⁴ *Herodotus* mentions, (II. 16.), that, in the porch of the temple at Saïs, there were pillars in the form of palm trees, *παστὰς λιθίνη μεγάλη καὶ ἡσκεμένη στυλοῖσί τε φοίνικας τὰ δένδρα μεμιμημένοισι.*

¹ תַּפּוּחַ.

² *Malus Cydonia*, *Celsius*, Part I. p. 255.

³ Μηλα.

⁴ تَفَّاح. See Höst's Description of Fez and Morocco, p. 305.

pared to this fruit,⁵ which was esteemed by the ancients chiefly on account of its fragrance, and was placed on the heads of those images in the sleeping-apartments which were reckoned among the household gods.⁶ The odour of the quince possesses a restorative power; hence, in the Song of Solomon, (chap. ii. 5), the bride says: "Refresh me with quinces, for I am sick of love." *Abulfadli*⁷ remarks, that the smell of the quince clears the brain, and renews and invigorates the animal spirits. *Phylarchus*⁸ affirms, that it even tends to lessen the power of deadly poisons.

In the Song of Solomon, (chap. ii. 3), a little before the last cited passage, it is said:

As a quince tree among the trees of the wood,
So is my beloved among the young men.
Under his shadow do I long to sit,
And his fruit is sweet to my palate.

This allusion would scarcely apply to our quinces, which are coarse and sour, and require to be boiled and

⁵ The Hebrew name seems derived from קִנְיָ, to scent.

Plutarch says, (Convival. Quæstt. V. 8), that the quince, *εὐωδίας ἀναπιμπλάναι τὸν ἀπτόμενον*, fills with fragrance whoever touches it. That the generic Greek name *μῆλον* has a special reference to the quince, has been shown by Bodæus à Stapel on Theophrastus' Hist. Plant. p. 338. Comp. Celsius, loc. cit. p. 259.

⁶ *Voss* on Virgil's Eclog. II. 51.


⁷ In *Celsius*, Part I. p. 261.

⁸ In *Athenæus*, Book III. p. 81.

mixed with sugar to render them palatable.⁹ But there seems to be a species of this fruit in the east, which is eaten raw. *Tavernier* mentions,¹⁰ that the district round Vodana, in the south of Arabia, yields a great abundance of fruit, especially plums and quinces, which have not the tartness of ours, and are eaten raw like apples. By the ancients, the quince was commonly boiled, along with honey or must.¹¹

In the Song of Solomon, (chap. viii. 5), it is said: "Under the quince tree I raised thee up. There thy mother brought thee forth; there she brought thee forth that bare thee." These words are by some supposed to receive light from the circumstance, that among the ancients the quince was sacred to the goddess of love. In antique sculptures, Venus is represented with a quince in her right hand, as the gift she had received from Paris. The amorous deities pull quinces in gardens and play with them.¹² For persons to send quinces in presents, to throw them at each other, to eat them to-

⁹ This is true even of the Egyptian quince. *Abdolatif* says, (p. 57 of the Arabic text), that the quinces in Egypt are very inferior, being small, sour, and very dear. *Forskäl* found, in the apothecaries shops at Cairo, only preserved quinces, Con-

serva Cydoniorum, . According to *Russell*, (Nat.

Hist. of Aleppo, Part I. p. 110 of the German Translation), the quince, at Aleppo, is not so juicy as in France.

¹⁰ *Voyage en Perse*, L. II. chap. 9.

¹¹ *Celsius*, p. 260.

¹² *Philostratus' Icones*, B. I. p. 738.

gether, were all tokens of love ; to dream of quinces was a sign of successful love.¹³

It is said in the *Book of Proverbs*, (chap. xxv. 11), that “ a word spoken fitly, or in season, is like golden apples in finely-wrought dishes or baskets.” We are not to understand, by that expression, artificial apples of gold, but quinces, one species of which was called the *gold apple*.¹⁴ It is alluded to by Virgil¹⁵ in his Pastorals, in a passage thus paraphrased by Dryden :

Ten *ruddy wildings* in the wood I found,
And stood on tiptoes reaching from the ground ;
I sent Amyntas all my present store,
And will to-morrow send as many more.

That the quince tree was formerly common in Palestine, appears from the circumstance, that various places obtained their names from it ; as Tappuach, Jos. xv. 34. Beth-Tappuach, Jos. xv. 33, and Aen-Tappuach, Jos. xvii. 7. It is mentioned in the pro-

¹³ *Theocritus* Idyll. III. 10. V. 88. VI. 6. Virgil's *Eclog.* III. 64. See several testimonies in *Celsius*, Part. I. p. 263, et seqq. *Della Valle* received from the daughter of a Christian merchant at Bagdad, with whom he fell in love, and whom he afterwards married, a beautiful quince, as a token of their reciprocal affection. See his *Travels*, Part I. p. 211 of the Ger. Transl.

¹⁴ *Χρυσόμελον*. Comp. J. E. Faber's Remarks in his *Beobacht. über d. Orient.* Vol. I. p. 372—380.

¹⁵ *Eclog.* III. 70, 71.

Quod potui, puero sylvestri ex arbore lecta,
Aurea mala decem misi. — —

phesy of Joel, (chap. i. 12), among the trees the locusts would devour. Various regulations concerning this tree and its fruit, are to be found in the Talmud.

30. *Tirzah*,¹ the *Evergreen Oak*.²

Among the trees, of whose wood idols were fabricated, mention is made in Isa. lxiv. 14, of a kind called *Tirzah*. This name occurs no where else in the Old Testament; and the Chaldee is the only one of the cognate languages in which it seems to have denoted a species of tree.³ In the most ancient Greek version, viz. that of Alexandria, there is here a blank. Two other Greek translators, Aquila and Theodotion, have employed a word which denotes the wild or forest oak,⁴ but which is not found in any other Greek writer. The oldest Latin translator explains the Hebrew word by "the evergreen oak,"⁵ which grows in the countries of the south, has prickly leaves, and bears a small acorn.⁶ That this tree was intended, in the passage in Isaiah, appears probable

¹ תִּרְזָה.

² *Ilex*, *Celsius*, Part II. p. 269. [*Linnæi* Gen. Plant. 158. *Aquifolium*. *Tournefort* Instit. Rei Herb. 600, Tab. 371.]

³ In the Chaldee Version, instead of the Hebrew תִּרְזָה there is תִּרְזָה.

⁴ Ἄγριοβάλανος.

⁵ *Ilex*.

⁶ Allon. See above, at. p. 240.

from the *Tirzah* being there mentioned along with another kind of oak; besides, that the wood of the evergreen oak was well adapted for being carved into images, from its hardness and durability. Pausanias says,⁷ that no other wood was used for that purpose but ebony, cypress, cedar, oak, evergreen oak, and lotus. It may be added, that the root of *Tirzah*, in Arabic,⁸ signifies *to be hard or thick*.⁹

31. *Keratia*,¹ the Carob Tree.²

In the parable of the prodigal son, (Luke xv. 16), it is said that he wished to appease his hunger with the “*husks* that the swine did eat,” the Greek term for husks being *Keratia*. That word designates generally the pods of any leguminous plant, but it especially denotes the fruit of the carob tree, called by the Germans *Johannisbrod*, *i. e.* John’s-bread, from the idea of its having been the Baptist’s food in the desert. The tree on which it grows is called by the Arabs, *Kharüb* or *Kharnüb*.³ It is of mo-

⁷ In the Arcadic. or Book VIII. p. 442 of Kühn’s Edition.

⁸ ^{د و} *تزرز*, hence ^{د و} *تروزز* crassities et firmitas duritiesve.

⁹ *Kimchi* and *Saadias* take ^{ו ו} *קראטיא* for the *pine* ^{ו ו} *סטנובר*, but its soft wood, which is so liable to be worm-eaten, was ill-fitted for being carved into images.

¹ *Κεράτια*.

² *Ceratonia Siliqua*, *Celsius*, Part I. p. 226.

³ ^{د و} *خروب*, ^{و و} *خرنوب*. This is used in the Arabic ver-

derate size, and puts forth a great many branches, which, as they are covered with large thick leaves, afford a pleasant shadow. The blossom is of a reddish colour. It grows into a pod or husk, curved like a sickle, more than six inches long, and an inch and a half broad; the colour is dark red, and the seeds which it contains are flat, hard, and bitter.⁴ These are thrown away, but the husks are preserved, and acquire so pleasant a taste when dried, as to be used for food. A remarkably sweet juice is obtained from them, with which they are made into a confection. This tree is so common in Palestine,⁵ that the husks are still used for fattening cattle.

sion, at Luke xv. 16, for *κεράτια*, as in the Syriac Church Translation, ܟܪܐܬܝܐ.

⁴ A scientific botanical description of this tree has been given by *Hasselquist* in his *Travels in Palestine*, p. 531 of the German Translation. *Comp. Cotwyk's Itiner. Hierosolymit.* p. 92. *Arvieux's Relations*, Part II. p. 206. *Oedmann's Collections*, No. VI. p. 137.

⁵ *Rauwolf* says, in the account of his journey from Bethlehem to Jerusalem: "Along the roads were a good many of the trees, which are called by the inhabitants *Chernubi*, and the fruit of which we call St. John's Bread; it was brought to us in great quantities." [The husks of the carob tree still retain in Greece the name of *κεράτια*, under which they are sold in the markets. They are used in feeding swine, but are not rejected by the poor. See *Hartley's Researches in Greece*, p. 241.—*Tr.*]

SECTION ELEVENTH.

MAN,¹ MANNA.

In the account of the journey of the Israelites through the desert, (Exodus xvi. 13, 14, 31), it is said: "In the morning, dew lay round about the camp. And when the dew was gone up, behold! there lay on the surface of the desert something small like snow, small like hoar-frost on the ground. And the house of Israel called it *manna*; and it was white like coriander seed, and its taste was like cakes made with honey." In all European languages the word *manna* is employed to describe a thick, clammy, and sweet gum, which, in the countries of the south, exudes from certain trees and shrubs, partly from the heat of the solar rays, partly from the punctures of insects, and partly from artificial incisions. The manna, so common in our dispensaries, comes from Calabria and Sicily, where, from the end of June to the end of July, it flows from a species of ash tree,² when it is pierced by the Cicada, an insect which, at first sight, might be taken for a locust, but, from the sting it carries under the body, is found to be wholly different. The gum which

¹ מן.

² Fraxinus Ornus and Fraxinus rotundifolia.

thus distills is fluid during the night, and looks like dew, but begins to harden in the morning. The manna of the East is far superior to the European; it is found in Syria, Arabia, and Persia, being obtained both from the eastern oak and tamarisk, and also from the shrubs called *El-Hadj*³ and *Akūl*.⁴ The Persian name of manna is *Terengabin* or *Terendjabin*.⁵ Rauwolf⁶ remarks, that the grains of manna have a great resemblance to coriander seed; and in this opinion most modern travellers agree. *Gmelin*⁷ mentions that the Persian manna is as white as snow, and consists in grains like coriander seed. The peasants around Ispahan collect it before sunrise from a prickly shrub, the branches of which they beat with a stick, holding under them a sieve, into which the grains fall. If the gathering be delayed beyond sun-rise, no manna is obtained, for it is then melted. This agrees with what is said in Exod. xvi. 21: "When the sun waxed hot, it melted."

³ الحجاج.

⁴ عاقول. By many it is incorrectly written *Algul*. Descriptions of both plants will be found in *J. E. Faber's* *Dissert. de Manna Arabica* in the *Opusc. medic. ex monumentis Arabum et Ebraeorum*, p. 124, et seqq. edited by Gruner.

⁵ ترنگبین, ترنجبین, composed of the two Per-

sian words *تر Ter*, and *انکبین enkyubin* honey.

⁶ Travels, Part I. p. 94, 95.

⁷ Travels through Russia to Persia, Part III. p. 28.

*Niebuhr*⁸ says, that manna is found in various countries of the East. "At Merdin in Mesopotamia, it appears like a kind of pollen, on the leaves of the trees called *Ballot*⁹ and *Afs*, (or according to the Aleppo pronunciation, *As*¹⁰), which I take to be of the oak family. All are agreed, that between Merdin and Diarbeker, manna is obtained, and principally from those trees which yield gall-nuts.¹¹ The manna-harvest occurs at Merdin in the month of August, or, as others say, in July. It is said to be

⁸ Description of Arabia, p. 145.

⁹ بلوط :

¹⁰ This is, perhaps, the tree which Burckhardt calls *Assef*, اصف, Travels in Syria, p. 866 of the Ger. Transl. It grows in the fissures of the rocks, and its crooked stem creeps up the mountain side like a parasite plant. According to the account of the Arabs, it bears a fruit of the size of a walnut, of a black colour and very agreeable taste. The rind of the tree is white, and the twigs are very thick, and covered with small thorns; the leaves are of the shape of a heart, and their verdure is like that of the oak. In the Lexicons of Golius and Freytag, اصف is explained by *Capparis*; but Burckhardt's description does not apply to the caper tree.

¹¹ *Burckhardt* heard the same thing from a Turk, who had passed the greater part of his youth at Erzeroum in Asia Minor. He said, that in Moosh, a town about three or four days journey from Erzeroum, there is a tree yielding gall-nuts, from which a substance is gathered, which is quite similar, in taste and consistency, to the manna of the peninsula of Mount Sinai, and is used by the inhabitants instead of honey. Travels in Syria, Ger. Transl. p. 956.

much more abundant after a dense mist, and when the atmosphere is full of moisture, than in clear weather. Any one who pleases may go into the woods and gather it to any extent, without seeking permission, or paying anything to the government. Three different kinds are collected, which are of different qualities. The whitest and finest is that which is procured before sunrise, by shaking it from the trees into a cloth. If it is not gathered at a very early hour, and a hot day ensues, it soon melts on the leaves; yet it is not then destroyed, but seems to increase in thickness daily. The peasants carry home a quantity of such leaves, and put them into boiling water, when the manna is seen to swim on the surface like oil. This kind of manna is probably that which the people of the east call *Manna-essema*,¹² that is, *Heaven's Manna*; not, however, because they think it falls from the air, for, in that case, it would be deposited on other trees besides those above mentioned." *Burckhardt*, during his journey through the *El-Ghor*,¹³ or Valley of Jordan, heard of the "Beirūk Honey"¹⁴ which seems to be a species of manna. It is described as a sap which is obtained from the leaves and branches of a tree called *Gharrab*,¹⁵ of the size of an olive tree, and with leaves like those of the poplar, only broader. It is found on the leaves as a dew, and is gathered from

¹² من السماء.

¹³ Loc. cit. p. 662.

¹⁴ عسل بيهروق.

¹⁵ غرب.

them, or from the ground beneath the tree, which is often covered with it. According to some, it is of a brown colour; according to others, rather grayish. When fresh it is very sweet, but, when kept for two days, it becomes sour. The Arabs eat it like honey and butter, and also use it to clean their water vessels, and make them air-tight. On the traveller asking whether it acted as a purgative, the reply was that it did not. The Beirūk honey is gathered only in the months of May and June. Some persons assured Burckhardt, that the same substance is also produced, in a similar manner, by the thorny tree, “Tereshresh,”¹⁶ and is gathered about the same season as that from the Gharrab.

The same traveller, in the account of his journey through the wilderness of Sinai, which was traversed by the Israelites, mentions another substance like manna, of which he gives the following account. Speaking of the Wady-el-Sheik,¹⁷ to the north of Mount Serbal, he says: “In many parts it was thickly overgrown with the tamarisk or *tarfa*;¹⁸ it is the only valley in the peninsula where this tree grows at present in any quantity, though some small bushes are here and there met with in other parts. It is from the *tarfa* that the manna is obtained; and

¹⁶ ترشرش .

¹⁷ Loc. cit. p. 793, 953.

¹⁸ طرفاء . Another kind of Tamarisk is called اثل

Athle, Ithle. See above, p. 253.

it is very strange that the fact should have remained unknown in Europe, till M. Seetzen mentioned it in a brief notice of his Tour to Sinai, published in the "Mines de l'Orient." This substance is called by the Arabs *mann*, and accurately resembles the description of the manna given in Scripture. In the month of June it drops from the thorns of the tamarisk upon the fallen twigs, leaves, and thorns, which always cover the ground beneath the tree in the natural state. The manna is collected before sunrise, when it is coagulated, but it dissolves as soon as the sun shines upon it. The Arabs clean away the leaves, dirt, &c. which adhere to it, boil it, strain it through a coarse piece of cloth, and put it into leathern skins. In this way they preserve it till the following year, and use it as they do honey, to pour over their unleavened bread, or to dip their bread into. I could not learn that they ever made it into cakes or loaves. The manna is found only in years when copious rains have fallen; sometimes it is not produced at all. I saw none of it among the Arabs, but I obtained a piece of last year's produce at the convent, where, having been kept in the cool shade and moderate temperature of that place, it had become quite solid, and formed a small cake: it became soft when kept sometime in the hand, or if placed in the sun for five minutes; but, when restored to a cool place, it became solid again in a quarter of an hour. In the season at which the Arabs gather it, it never acquires that degree of hardness which will allow of its being pounded, as the Israelites are said to have done in Num. xi. 8.

Its colour is dirty yellow, and the piece which I saw was still mixed with bits of tamarisk leaves; its taste is agreeable, somewhat aromatic, and as sweet as honey.¹⁹ If eaten in any considerable quantity, it is said to be highly purgative. The quantity of manna collected at present, even in seasons when the most copious rains fall, is very trifling, perhaps not amounting to five or six hundred pounds. It is entirely consumed among the Bedouins, who consider it the greatest dainty which their country affords. The harvest is usually in June, and last six weeks; sometimes it begins in May." Burckhardt farther remarks, that the tamarisk is one of the most common trees in Nubia, and throughout the whole of

¹⁹ Various particulars, drawn from ancient writers, respecting the tamarisk manna, will be found in the Dissertation of *Faber*, (referred to in note 4), p. 136, et seqq. More recent observers are of opinion, that the manna, like the honey-dew, is the product of insects. *Captain Frederick*, of Bombay, witnessed the gathering of manna at Khonsar, on the road from Hamadan to Ispahan, and he thus describes it in the *Transactions of the Literary Society of Bombay*, Vol. I. p. 251: "All the young twigs were covered with an innumerable quantity of small insects, which moved very sluggishly. We remarked three different kinds; one was quite red, and so small as to be scarcely perceptible, another was of a darker colour, and had the appearance of a common louse, only not so broad, the third was like a small fly. It is believed that the manna is produced by these animals, for, on the closest examination, nothing could be seen oozing out from any opening in the shrub. The manna is collected every second day; for, if done oftener, the insects become exhausted, and yield little or none." *Comp. Sprengel's New Discoveries in Botany*, Vol. III. p. 390.

Arabia; on the Euphrates, on the Astaboras. in all the valleys of the Hedjaz and Bedja, it grows in great quantities, yet no where but in the region of Mount Sinai did he hear of its producing manna.

Yet, though the manna now described resembles, in point of form, appearance, and various other properties, the substance spoken of by Moses, there is one important particular in which they differ. The manna of the Israelites lay, we are told, (Exod. xvi. 14), round about the camp, "upon the ground," like hoar-frost; whereas the modern manna of the East proceeds from the stems, boughs, or leaves of certain trees, and it is there found deposited. "Ought we not, then, says *Oedmann*,²⁰ to return to the ancient opinion, that the manna really fell with the dew? We have only to suppose that the strong heat in Arabia causes the evaporation of a number of sweet gums from certain trees and shrubs, (such as the Akūl, and various species of the Rhamnus, the groves of palm trees, &c.) that these impregnated vapours swim or rise in the atmosphere as long as they exceed it in specific lightness, but that, as the cool of the night approaches, they become condensed and fall along with the dew, or rather enter into composition with it, and form one substance. If it falls in a large quantity, it will first assume a clammy consistency like honey, but become gradually more hardened through the influence of the night air; and, after the dewy particles are exhaled, there will remain the grains of manna, like hoar-frost or sugar,

²⁰ Miscellan. Collectt. in Nat. Hist. No. VI. p. 7.

which will melt, however, in the increasing heat of the sun."

But the question still remains, whether the accounts we have of the Arabian manna can be made to agree with this representation. The Arabian physician *Ebn Sina*, commonly called *Avicenna*, in his great work on Surgery and Medicine,²¹ describes the manna thus: "Manna is a dew, which falls on stones or vegetables, has a sweet taste, is either of the consistence of honey, or hardened into grains." In another place,²² when writing of a kind of "honey-dew," he says, "it is a vapour that ascends, and is prepared in the atmosphere, but falls during night upon trees and stones, and has a resemblance to honey." He cannot here intend by "honey-dew" the substance known among us by that name, which is left by certain insects on the leaves of plants; for he says, it is found also on stones, and is used by man. Avicenna, however, is not the first by whom the substance has been noticed. Aristotle had said, in his History of Animals²³: "Honey falls from the air, principally at the rising of the greater stars, and when the rainbow bends itself, yet not before the rising of the Pleiades." With this agrees Pliny²⁴: "About the rise of the Pleiades, honey falls from the air, towards day-break. Then, at the morning dawn, the leaves of the trees are bedewed with honey; and whoever is out at that early hour, feels his clothes

²¹ Canon. p. 212 of the Arabic text.

²² Ibid. p. 233.

²³ Book V. Chap. 22.

²⁴ Nat. Hist. XI. 12.

covered, as it were, with unctuous matter, and his hair clammy” This is substantially confirmed by modern observers. *Felix Fabri*²⁵ mentions, that in his journey through Stony Arabia, he found the dew quite sweet. *Shaw*²⁶ remarks, that as he was riding one night in Palestine, his saddle and bridle were covered with a clammy dew. Forskäl was told by the monks of Tor, that manna falls on the roof of their convent. That the substance of the manna, which exudes from plants, may be carried into the air, appears more clearly still from the published narrative, (cited by Oedmann²⁷), of what happened at Vizzine in Sicily, in the year 1793. Early in the morning, the sky being clear, and the wind easterly, there arose in the south a brownish black cloud, which soon dissolved itself in rain. The drops, which were very fine, produced a viscous moisture as sweet as sugar, and, having become hardened by the sun’s heat, it assumed the appearance of mastich. The peasants who ate of it found it pleasant, and it possessed the same medicinal qualities as manna.

Several travellers, who have journeyed through the deserts of Arabia, give a similar description of the manna that, at certain seasons of the year, is found there. *Breitenbach*²⁸ says, it falls in the district of Sinai in August and September, resembles, when fresh, the hoar-frost or dew, and hangs in

²⁵ Travels in the Holy Land, Part I. p. 305.

²⁶ Travels, p. 286 of the Ger. Transl.

²⁷ Stockholm Post for 1794, No. 8.

²⁸ Travels in the Holy Land, Part I. p. 193.

drops on the leaves, grass, twigs, and stones. When it is gathered, it runs together like pitch, but melts over the fire and in the heat of the sun; its taste is like that of honey, and, when eaten, it adheres to the teeth. *Felix Fabri* adds, that this manna is a thick, honey-like dew, which, before sunrise, is found on the leaves and grass like coriander seed. *Oedmann* quotes from the unpublished MS. of a learned Swedish traveller called *Eurmann*, to the effect that the manna does not fall every year; for that, when he was at Sinai in the year 1712, it had failed for two years in succession. He adds, that it falls during night, and resembles snow, but must be collected before sunrise, otherwise it melts; when gathered at the proper time it hardens into small grains like coriander seed.

Yet, notwithstanding these points of resemblance between the Arabian manna and the manna of the Bible, there were, in the supply of the latter to Israel, various circumstances that were obviously supernatural. The former only appears during two months of the year, and in many years not at all; the latter fell during the whole year, and continued to do so for the long period of forty years without intermission. A double portion, moreover, fell on the sixth day, but none on the Sabhath; if kept till the morrow it bred worms, (Exod. xvi. 19, 20); and, while the natural manna is used only as a condiment or medicine, the other served for daily nourishment like bread. *Rauwolf*,²⁹ indeed, says, in speaking of

²⁹ Travels, p. 245.

the country round Mosul: "A kind of manna is very common here, in pieces of the size of a man's fist. I was told it came from Armenia; it is of a brown colour, and, though not so sweet as our Calabrian manna, is pleasant to the taste, and, being less laxative, is eaten in large pieces every morning, as the peasants of the mountain district of Algau eat cheese." Yet none of the many travellers, who have given a detailed account of the Arabian manna, ever speak of it as ordinary food, which would supply the place of bread; nor, judging from its qualities, is it likely that it can ever be so used.

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